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ICHTHYOPLANKTON AND STATION DATA FOR CALIFORNIA COOPERATIVE OCEANIC FISHERIES INVESTIGATIONS SURVEY CRUISES IN 1981

David A. Ambrose Richard L. Charter H. Geoffrey Moser Bradley S. Earhart

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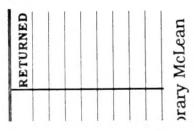
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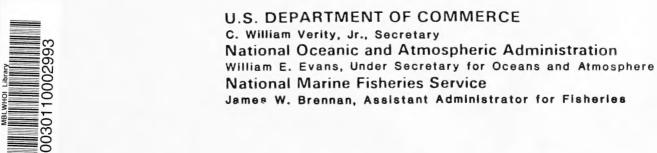
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Southwest Fisheries Center National Marine Fisheries Service La Jolla, CA 92038

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CONTENTS

	Page
List of Figures	iii
List of Tables	iv
Abstract	1
Introduction	1
Sampling Area and Pattern	2
Sampling Gear and Methods	3
Laboratory Procedures	4
Identification	5
Computer Entry and Editing	9
Species Summary	10
Explanation of Tables	10
Acknowledgments	11
Literature Cited	13
Figures	17
Tables	25
Index	166

LIST OF FIGURES

		Page
Figure 1.	Composite arrangement of diagrammatic charts showing areas sampled on each CalCOFI cruise during 1981	17
Figure 2.	Station pattern for CalCOFI Cruise 8012 showing tracks for each vessel	18
Figure 3.	Station pattern for CalCOFI Cruise 8101	19
Figure 4.	Station pattern for CalCOFI Cruise 8102	20
Figure 5.	Station pattern for CalCOFI Cruise 8104	21
Figure 6.	Station pattern for CalCOFI Cruise 8105	22
Figure 7.	Station pattern for CalCOFI Cruise 8107 and 8108	23
Figure 8.	The basic station plan for CalCOFI cruises from 1950 to the present	24

LIST OF TABLES

		Page
Table 1.	Station and plankton tow data for CalCOFI cruises in 1981	25
Table 2.	Pooled occurrences of fish larvae taken during CalCOFI cruises in 1981	50
Table 3.	Pooled numbers of fish larvae taken during CalCOFI cruises in 1981	54
Table 4.	Numbers of fish larvae taken on stations occupied during CalCOFI cruises in 1981	58
Table 5.	Summary of pooled occurrences of fish larvae taken on CalCOFI cruises from 1972-1981	160
Table 6.	List of stations with multiple occupancies in one month during 1981	165

ABSTRACT

This report provides ichthyoplankton and associated station tow data from California Cooperative Oceanic Fisheries Investigations (CalCOFI) cruises conducted off California Baja California in 1981. It is the twenty-third report in a series that presents these data for all biological-oceanographic CalCOFI surveys from 1951 to the present. A total of stations was occupied during 7 multivessel cruises over the survey area which extended from Pt. Reyes, California to Pt. San Juanico, Mexico, and seaward to several hundred miles. The data are listed in a series of 6 tables; the background, methodology, and information necessary for interpretation quantitative analysis of the data are presented in an accompanying text. All pertinent station and tow data, including volumes of water strained and standard haul factors, are listed in the first table. Another key table lists, by station and month, standardized counts of each of the 150 larval fish categories identified from survey samples. This and previous and subsequent reports make the CalCOFI ichthyoplankton and station data available to all investigators and serve as guides to the newly developed computer data base.

INTRODUCTION

report, the twenty-third of a series, provides ichthyoplankton and associated station and tow data California Cooperative Oceanic Fisheries Investigations (CalCOFI) joint biological-oceanographic survey cruises conducted in 1981. This program was initiated in 1949, under the sponsorship of the Marine Research Committee of the State of California, to study the population fluctuations of the Pacific sardine (Sardinops sagax) and the environmental factors that may play a role in such fluctuations. CalCOFI, known as the California Cooperative Sardine Research Program from 1949 to 1953, was made up of representatives of the South Pacific Fisheries Investigations (SPFI) of the U.S. Fish and Wildlife Service [now the La Jolla Laboratory, National Marine Fisheries Service (NMFS)], the Scripps Institution of Oceanography (SIO), the California Department of Fish and Game (CDFG), the California Academy of Sciences (CAS) and the Hopkins Marine Station of Stanford University. The first three of these agencies supplied ships and personnel to conduct the sea surveys. NMFS processed plankton samples and analyzed the ichthyoplankton from them. processed and analyzed the hydrographic samples and measurements and also analyzed invertebrate groups from the plankton samples.

The boundaries, station placement, and sampling frequency for the CalCOFI survey area were based on the results of joint biological and oceanographic cruises conducted by NMFS and SIO during 1939-41. Those cruises were designed to collect sardine eggs and larvae and associated hydrographic data over the entire areal and seasonal spawning range of the species. On these survey cruises, plankton tows were made to 70 m, a depth which

encompassed the vertical distribution of sardine eggs and larvae. Wide-ranging joint biological and oceanographic survey cruises were resumed in 1949 with sardine as the focus; however, an increasing interest in other biological components resulted in the deepening of standard tows to 140 m in 1951. This marked the beginning of truly quantitative ichthyoplankton sampling on CalCOFI surveys.

Hydrographic data resulting from CalCOFI surveys in have been published in standard formats (Univ. of Calif., 1985a,b). A computer data base for eggs and larvae of sardine and anchovy, for larvae of Pacific hake (Merluccius productus), jack mackerel (Trachurus symmetricus) and Pacific (Scomber japonicus), and for eggs of Pacific saury (Cololabis saira) was established in 1969. The development of a data base for other fish larvae is a complex undertaking because competency identification has evolved steadily over the past 38 We began the task of producing a CalCOFI ichthyoplankton base and associated data report series in 1983. All available original records for 1981 were subjected to an extensive verification and editing process to produce this report. and previous (Ambrose et al., 1987a,b,c; 1988a,b,c; Sandknop et al., 1987a,b; 1988a,b,c,d; Stevens et al., 1987a,b,c; 1988a,b; Sumida et al., 1987a,b; 1988a,b,c) and subsequent reports make the CalCOFI ichthyoplankton and station data available to investigators and serve as guides to the computer data base. data base will be modified when additional errors are discovered and when composite taxa from the earlier years are reidentified. These reports are the fundamental reference documents against which subsequent changes in the data base can be compared.

SAMPLING AREA AND PATTERN

In 1981, the six CalCOFI cruises occupied stations during portions of all months from January to August. A seventh cruise (8012), conducted in November and December of 1980, was included in the 1981 data base. A total of 978 stations included in data base was occupied on seven cruises, with an average of stations per cruise (range 81-206). Coverage of the survey station pattern varied among cruises and the entire survey was not covered on any single cruise (Figures 1-7, Table 1). area off northern California (lines 40-57) was not covered. major lines were occupied off central California (lines 60-76.7) on Cruises 8101 through 8107 and only line 60 was excluded from the coverage on Cruise 8012. All major lines between Pt. Conception, California, and Pt. San Juanico, Baja California (lines 80-137) were occupied on Cruise 8012; southerly coverage of this region stopped at Pt. Pequena (line 133.3) on Cruise 8104, at Pt. Abreojos (line 130) on 8102, at San Cristobal (line 123.3) on 8108, and at Rosario Bay (line 110) on 8101 and The area off southern Baja Califoria (lines 140-157) not surveyed in 1981. Typically, coverage did not extend beyond station 90 (approximately 160-260 miles offshore). stations ending in a decimal were rounded off in the station

plots (Figures 2-7)¹. Cruises 8107 and 8108 in this report are considered a single cruise (8107) in the SIO hydrographic data base and are combined in Figure 7.

Two vessels were employed on these cruises: the David Starr Jordan of NMFS and the New Horizon of SIO. The David Starr Jordan was used on six cruises and the New Horizon on five (Univ. of Calif., SIO, 1985a,b).

After 1969, CalCOFI surveys were made on a triennial basis. These began in 1972 and continued every 3 years (1975, 1978, 1981, 1984) until 1985 when annual surveys were resumed.

SAMPLING GEAR AND METHODS

In 1978, the standard 1-m ring net with towing bridle was replaced by a bridle-free "bongo" net. The bongo frame (McGowan and Brown, 1966; Smith and Richardson, 1977) consists of a pair of circular frames connected by a central axle which horizontal to the towing wire and attached to it by a clamp. axle is free to rotate so that the mouth openings are vertical during the tow. The standard CalCOFI version of the bongo net has 71 cm diameter frames and net material constructed of nylon Each net consists of a cylindrical section ca. 146 cm long, a truncated conical section ca. 161 cm long, and a detachable cod end. The starboard net, from which the standard sample is taken, is constructed of 0.505 mm mesh. The sample from the port net is used for other purposes; the mesh size is either 0.505 mm or 0.333 mm mesh depending on requirements. cod end of each net is constructed of 0.333 mm mesh (W. C. Flerx, pers. comm.)

The standard tow in 1981 was an oblique haul to ca. 210 m depth (to 15 m of the bottom in shallow areas) designed to $_3$ filter a constant amount of water per depth interval (ca. $2m^3/m$ of depth) over the vertical range of most ichthyoplankters. Hauls

¹CalCOFI lines (Figure 8) are arranged perpendicular to the coastline and extend from the Canadian border (line 10) to below Cape San Lucas, Baja California (line 157). Stations were established on the basis of a perpendicular to line 80 (off Pt. Conception) at a point designated as station 60. Stations were plotted seaward and shoreward from station 60 on each line. Cardinal CalCOFI lines (those ending in "0") are 120 miles apart and usually bracket two ordinal lines (ending in "3" or "7"), so that lines are 40 miles apart over most of the pattern. Cardinal stations are 40 miles apart and typically these are separated by a station number ending in "5" so that stations are 20 miles apart out to station 90 on most lines. Stations are placed at closer intervals near the coast and islands to accommodate these features (see Kramer et al., 1972 for further details).

were made at a ship speed of 1.5-2.0 knots and initiated by clamping the net to the towing cable with the 34 kg terminal weight below the surface. The net was lowered to ca. 210 m depth by paying out 300 m of wire over a 6 minute period (35 m of depth/min.). After fishing at depth for 30 seconds, the net was retrieved at 20 m/min. (14 m depth/min.). The angle of stray of the towing cable was recorded every 30 seconds and maintained at 45° (±3°) by adjusting the ship speed and course. After reaching the surface, the nets were washed down and the samples preserved in 5% formalin buffered with sodium borate. Flowmeter readings were made at the beginning and end of each tow. Descriptions of the methods are given by Kramer et al. (1972) and Smith and Richardson (1977). The bongo net frame is described in McGowan and Brown (1966) and Smith and Richardson (1977).

LABORATORY PROCEDURES

Laboratory processing began with the determination of a displacement volume for each sample (methods described in Staff, SPFI, 1953 and Kramer et al., 1972). Sorting involved the removal of ichthyoplankton from the sample and identification and separation of: eggs and larvae of Pacific sardine and northern anchovy; larvae of Pacific hake; and eggs of Pacific saury. samples were fractioned into aliquots using a Folsom plankton splitter (McEwen et al., 1954) prior to sorting. Criteria fractioning were: 1) samples taken at a distance greater than 200 nautical miles from shore were not fractioned, 2) samples taken closer than 200 miles from shore and containing 25 ml plankton or less were not fractioned, and 3) samples taken closer than 200 miles from shore and containing more than 25 ml plankton were fractioned to 50% of their original volume (J. Thrailkill, pers. comm.). Aliquot percentages for fractioned samples from 1981 are listed in Table 1 under the "Percent Sorted" column; 42% of the samples collected in 1981 were fractioned.

A "standard haul factor" (SHF) was calculated for each tow to make them comparable and allow estimations of areal abundance. This factor adjusts the number of eggs or larvae in a haul to the number in 10 m of water strained per meter of depth fished. If the vertical distribution of the species has been encompassed then the adjusted value is equivalent to the number under 10 m of sea surface. The SHF is calculated for each haul by the formula:

$$SHF = 10 D V$$

V = total volume of water (m³) strained
during the haul

 $V = R \cdot a \cdot p$

where R = total number of revolutions of the current meter during the haul

 $a = area (m^2)$ of the mouth of the net

p = length of column of water (m) needed to
 produce one revolution of the current
 meter.

Tow depth, volume of water strained, and standard haul factor are listed in Table 1 for each tow taken during 1975. Detailed descriptions of factors involved in calculating these values are presented in Ahlstrom (1948), Kramer et al. (1972), and Smith and Richardson (1977).

IDENTIFICATION

Identification of ichthyoplankton species beyond separated during the sorting process was carried out by a separate group of specialists. Ontogenetic stages of fishes are inherently difficult to identify and this is further complicated by the large number and diversity of species which contribute to the ichthyoplankton of the California Current region. identifications were accomplished by establishing ontogenetic series on the basis of morphology, meristics, and pigmentation and then identifying these series by relating them to known metamorphic, juvenile, or adult stages with overlapping features (Powles and Markle, 1984). A total of 148 taxa was identified for 1981, with 93 taken to species, 27 to genus, 24 to family, and 4 to order or suborder. In the decade of the 1970's some taxa were identified for the first time. These included larvae of the bathylagid Bathylagus longirostris, the gonostomatids Danaphos oculatus and Valencienellus stellatus, the myctophid Bolinichthys spp., and the trichiurid Lepidopus xantusi. Larvae in the families Scopelarchidae and Nomeidae were identified to genus or species. Five species of rockfish in the Sebastes group were also identified: S. aurora, S. jordani, S. levis, S. macdonaldi, and S. paucispinis. In 1981, four species of Sciaenidae were identified for the first time: Cheilotrema saturnum, Genyonemus lineatus, Roncador stearnsii, and Seriphus politus.

The task of producing a reliable and equitable ichthyoplankton data base required extensive procedures to verify, correct, and edit the original identifications. The primary data source was the original identification sheets (see Kramer et al., 1972, for examples); however, a critical resource used in all phases of this process was the CalCOFI

ichthyoplankton collection in which the samples are archived. Throughout the course of CalCOFI ichthyoplankton studies, samples have been identified to the lowest taxon possible. In reviewing these identifications for the data base, our approach has been conservative and we have preserved those identifications counts which we could confirm, while correcting as many of errors as possible. After computer entry, taxonomic errors inconsistencies in the data base were corrected and the most obvious identification errors were corrected. Our current knowledge of ichthyoplankton techniques coupled with a precise understanding of the development of identification competency in the program over the years allowed us to critically judge the historical records. Identifications were changed to different lumped to a higher taxonomic category, or given a more precise taxonomic name. In some cases, identifications of a taxon were inconsistent among cruises in a year. These records were made equitable by lumping to the higher taxonomic category to avoid biases that could result in quantitative misinterpretation.

Next, statistical, seasonal, and geographic outliers were identified, employing a series of graphic summaries and listings. Examination of geographic outliers proved to be especially effective because of our accumulated knowledge of species distributions. In the course of examining samples for these outliers, other identification errors were discovered and eventually all taxa were scrutinized to some extent. Lastly, certain taxa were reexamined in all samples for the entire CalCOFI time series. These taxa were selected because of their commercial, ecological, phylogenetic, or zoogeographic importance or because taxonomic confusion was at the ordinal level. The following is a list of the taxa for 1981 which received special attention, with explanations and caveats intended to aid in quantitative interpretations:

- Sardinops sagax all specimens south of line 120 checked for misidentification of Opisthonema spp.
- Engraulis mordax some nearshore samples of small E. mordax may contain other anchovy genera which could not be differentiated.
- Nansenia spp. all specimens checked and identified as N. candida or N. crassa; all specimens of these species near their range boundaries checked.
- Bathylagus spp. includes small and/or disintegrated specimens of Bathylagus or Leuroglossus stilbius.
- Stomiiformes all specimens checked and identified to genus or species; residuals are small, poorly preserved or unavailable specimens.
- Cyclothone spp. tentative and sporadic identifications to species were lumped to genus.

- Vinciguerria lucetia some V. poweriae may remain in these samples because small larvae of the two species could not be differentiated; sporadic identification of V. poweriae began in 1961.
- Sternoptychidae tentative and sporadic identifications of hatchetfishes to genus were lumped to family.
- Paralepididae all specimens examined and identified to species; residuals are small, poorly preserved or unavailable specimens.
- Scopelarchidae all specimens reidentified to genus or species; residuals are small, poorly preserved specimens.
- Lampanyctus spp. tentative and sporadic identifications to species lumped to genus.
- Lampanyctus regalis underrepresented because of inability to differentiate small larvae (<5 mm) from those of other species of the genus; counts may include other species of the genus because of difficulty in identifying larvae of this large and complex genus.
- Lampanyctus ritteri comment for L. regalis applies to this species.
- Hygophum spp. all specimens reidentified to species; residuals
 are small, poorly preserved specimens.
- Hygophum atratum all specimens checked.
- Hygophum reinhardtii all specimens checked.
- Physiculus spp. specimen checked.
- Ophidiiformes this category did not exist originally and unidentified larvae of this order, including a type referred to as "Zoarcidae", were originally placed in the "blenny" category.
- Ophidion scrippsae all specimens checked.
- Trachipteridae tentative and sporadic identifications to genus were lumped to family.
- Melamphaes spp. all identifications ascribed to Melamphaidae were reexamined and assigned to genus (Melamphaes, Poromitra) or species (Scopelogadus bispinosus); larvae originally identified as Melamphaes spp. were not reexamined and this category may contain other melamphaid genera.
- Hexagrammidae all specimens checked and identified to genus or species; residual is a small, poorly preserved specimen.

- Oxylebius pictus all specimens checked.
- Zaniolepis spp. all specimens checked.
- Blennioidei this is the residual of the completely reexamined "blenny" category, which also contained various misidentified ophidiiforms, and is now restricted to members of northern stichaeioid families and true blennioids (other than Hypsoblennius spp.) in the southern part of the pattern).
- Labridae all specimens originally identified to family were reexamined and assigned to genus (Halichoeres spp.) or species (Oxyjulis californica, Semicossyphus pulcher).
- Chromis punctipinnis records south of about line 120 may include other pomacentrid taxa.
- Carangidae all specimens checked; tentative and sporadic identifications to genus or species (except *Trachurus symmetricus* and *Seriola lalandi*) were lumped to family.
- Seriola lalandi specimen checked.
- Gerreidae tentative and sporadic identifications to genus lumped to family.
- Haemulidae tentative and sporadic identifications to genus lumped to family.
- Girella nigricans specimen checked.
- Caulolatilus princeps all specimens checked.
- Sciaenidae larvae identified to species; residuals are small, poorly preserved specimens.
- Scombridae all larvae identified to this family or constituent taxa (except *Scomber japonicus*) were reexamined and reassigned.
- Pleuronectiformes all specimens of this category were reexamined and reassigned.
- Citharichthys spp. all larvae identified to species were lumped to genus except C. stigmaeus; category includes larvae of Etropus spp.
- Citharichthys stigmaeus includes larvae larger than ca. 4.5 mm; smaller larvae are in Citharichthys spp.
- Paralichthys spp. all specimens of this genus were examined and most were assigned to P. californicus or Xystreurys liolepis.

Xystreurys liolepis - originally misidentified as Paralichthys californicus; all specimens reidentified.

Glyptocephalus zachirus - all specimens examined.

Microstomus pacificus - all specimens examined.

Pleuronichthys spp. - all larvae of this genus and constituent species were examined and assigned to species; residuals are unavailable specimens.

Psettichthys melanostictus - all specimens examined.

COMPUTER ENTRY AND EDITING

Each taxon on the original identification sheets was given a 3-digit code based on the list of codes in Haight et al. (1979). Taxon codes and counts from these sheets were keypunched by cruise and station, along with pertinent station and tow data and entered into the VAX 11/780 computer at the University California, San Diego, Computing Center. After entries were completed for an entire year, print-out listings of taxa and counts on each station were compared with the original data sheets to eliminate keypunch errors. Next, data in the file were cross-checked with data on an existing file which contained: station and tow data; numbers of eggs of sardine, anchovy, saury; numbers of larvae of sardine, anchovy, hake, mackerel, and Pacific mackerel; total number of fish eggs; and total number of fish larvae.

Discrepancies in ichthyoplankton data in these two files were corrected by inspecting original records from the sorting laboratory, the original ichthyoplankton identification sheets, and the samples themselves. Station and tow data discrepancies between the two files were corrected by reviewing ships' logs and deck tow sheets, original records from the sorting laboratory, cruise announcements, publications, header information on the ichthyoplankton identification sheets, and station plots generated for each cruise. Eventually all station and tow data were checked by comparing these sources.

The corrected ichthyoplankton data base was then examined statistically and outliers were found and checked as above. Distributional plots were then prepared for each taxon and these were checked by reviewing the data sources mentioned above and by examining archived specimens. A listing of each taxon by station (Table 4) was produced, which became the primary document for subsequent checks. Misidentifications found in geographic outlier checks and other misidentifications and data problems discovered in the course of examining archived samples resulted in several iterations of Table 4. Finally, totals in Table 4 were checked against annual summaries of incidence and abundance

(Tables 2 and 3). Ecological analyses of the data were conducted concurrently with editing procedures and provided cross-checks that allowed correction of errors.

SPECIES SUMMARY

Larvae of northern anchovy (Engraulis mordax) represented 65.5% of all fish larvae taken on CalCOFI cruises during 1981 and numbered 10 times as many as the rockfish genus, Sebastes spp., the next most abundant taxon with 6.4% of the total larvae (Table 2, 3). Northern anchovy also ranked first in incidence; Sebastes ranked 2nd. The next most abundant species was the gonostomatid Vinciquerria lucetia with 5.0% of the total, followed by the deepsea smelt Leuroglossus stilbius with 3.5%; they ranked and 4th respectively, in incidence. Pacific hake, Merluccius productus, ranked 5th in abundance (2.5%) and 12th in occurrence. myctophids, Stenobrachius leucopsarus and Triphoturus mexicanus, ranked 6th (2.1%) and 7th (1.7%) in number and 6th and 8th in occurrence. The final 3 taxa in the top 10 collected in 1981 were the Pacific mackerel, Scomber japonicus, with 1.1%, the myctophid *Protomytophum crockeri*, with 1.0%, and the sanddab genus *Citharichthys*, also with 1.0% of total larvae. These 3 taxa ranked 27th, 2nd, and 9th in incidence, respectively. These 10 taxa contributed 89.7% to the total number of larvae collected in 1981; the remaining 10.3% was distributed among 138 taxa plus the disintegrated and unidentified categories. Of the 10 taxa, 3 were coastal demersal groups, 2 were coastal pelagic species, and 5 were midwater species.

EXPLANATION OF TABLES

Table 1 - This table lists by cruise the pertinent station and tow data for 1981 (including November and December, 1980), the volume of water filtered and standard haul factor for each tow, the percent of sample sorted, and the total numbers of fish eggs and larvae. CalCOFI cruises are designated by four digits; the first two indicate the year and the second two the month. Within each cruise the data are listed in order of increasing line and station number (southerly seaward directions); the order of station occupancy is shown on the station charts (Figures 2-7). Stations are designated by two groups of digits; the first indicates the line and decimal fraction and the second set indicates the station on the line. Time is listed as Pacific Standard Time at the start of each tow in 24-hour designation. Methods for determining depth, volume of water strained, standard haul factor, and percent sorted were described in the methods The values for total fish eggs and larvae represent raw counts (unadjusted for percent sorted or standard haul factor). Ship codes are as follows: JD, David Starr Jordan; NH, New Horizon.

- Table 2 This table lists pooled occurrences of all larval fish taxa taken during 1981 in ranked order.
- Table 3 This table lists pooled counts of all larval fish taxa during 1981 in ranked order. Numbers are adjusted for percent sorted and standard haul factors.
- Table 4 This table gives numbers of fish larvae for each taxon in 1981, listed by station and calendar month in which the tow was taken. Counts are adjusted for percent of sample sorted and standard haul factor. Average values are given for stations occupied more than once during a month. See Table 1 for station and tow data and Table for listing of stations with multiple occupancies during a month. Multiple occupancies occurred when a station was occupied more than once during a calendar month; in some cases, multiple occupancies resulted from separate cruises. The orders are listed in "phylogenetic" sequence modified from Nelson (1984). Subtaxa within each order are listed alphabetically. Page numbers for each taxon are given in the index at the end of the report.
- Table 5 This table is a summary of pooled occurrences of all larval fish taxa taken on CalCOFI surveys from 1972 to 1981. Taxa are listed in the same order as in Table 4.
- Table 6 List of stations with multiple occupancies in one month during 1981.

ACKNOWLEDGMENTS

The senior author, Morgan Busby, Elaine Sandknop, Elizabeth Stevens, and Barbara MacCall originally identified larvae from CalCOFI cruises of 1981. Ronald Whyte coded each larval fish taxon or type and Rita Ford entered them into the computer. Debby Snow efficiently assisted in all aspects of data editing and retrieval. Cindy Meyer and James Ryan provided programming assistance. Dorothy Roll designed the CalCOFI data acquisition system and provided data processing support. Ken Raymond, Roy Allen, and Henry Orr helped with graphics and production of the report. Lorraine Prescott prepared the manuscript for printing. Paul Smith determined statistical outliers, provided assistance geographical outlier checks and offered suggestions throughout the project. Izadore Barrett, Director of the Southwest Fisheries Center provided support critical to the completion of the project. James Thrailkill planned CalCOFI surveys and supervised cruises, data handling, and plankton sorting from 1949 to 1986 and is largely responsible for the high quality of these operations. Without the vision and direction of Elbert Ahlstrom and Elton Sette and the dedicated efforts of the many people who collected, processed, and analyzed the samples,

this data base would not exist. During the final stages of preparing this report, Reuben Lasker succumbed to cancer. As Chief of the Coastal Fisheries Resources Division, SWFC, his encouragement and support for all of us involved in the sea surveys, sample processing, and data base and report preparation were unwavering. We dedicate this work to his memory.

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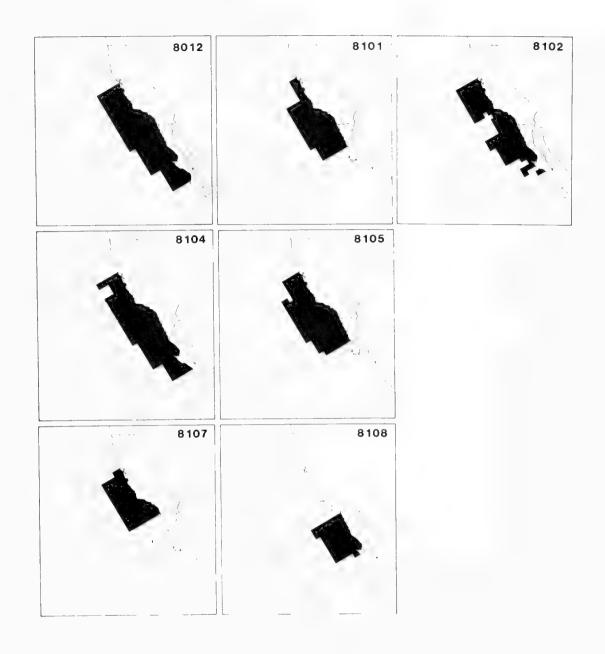


Figure 1. Composite arrangement of diagrammatic charts showing areas sampled on each CalCOFI cruise during 1981.

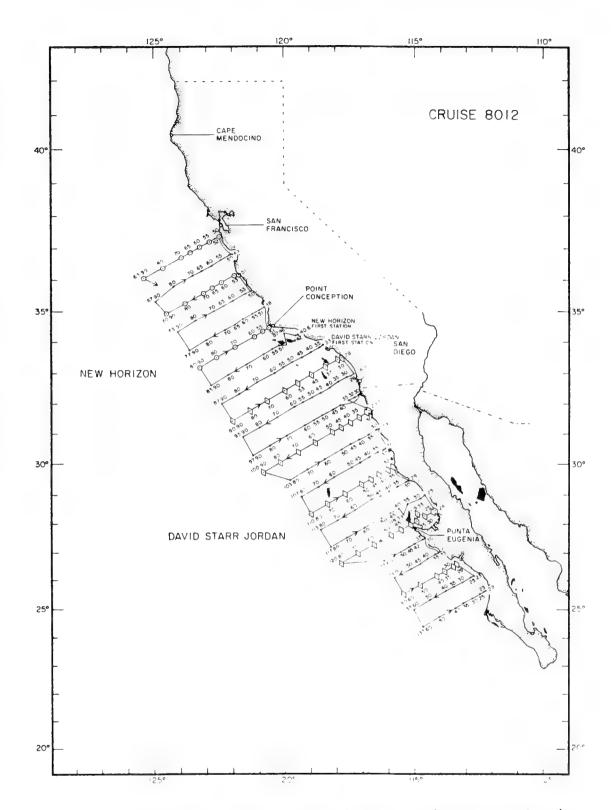


Figure 2. Station pattern for CalCOFI Cruise 8012 showing tracks for each vessel. Stations with plankton tows are indicated by a dot; circles designate hydrographic stations; diamonds signify STD recordings. Figures 2-7 modified from charts in Univ. of Calif., SIO (1985a, 1985b) to include only those stations listed in Table 1 of this report.

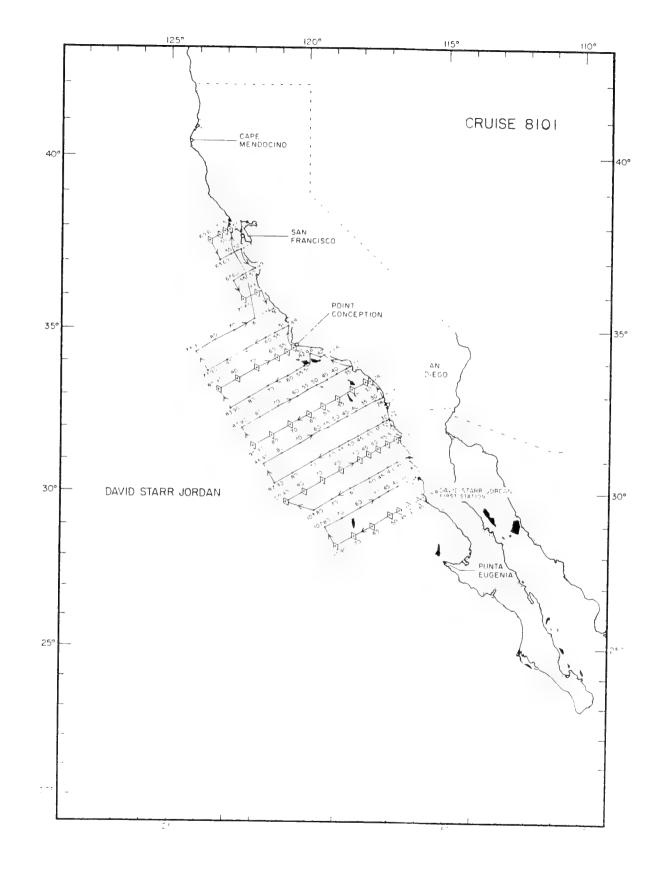


Figure 3. Station pattern for CalCOFI Cruise 8101. Symbols as in Figure 2.

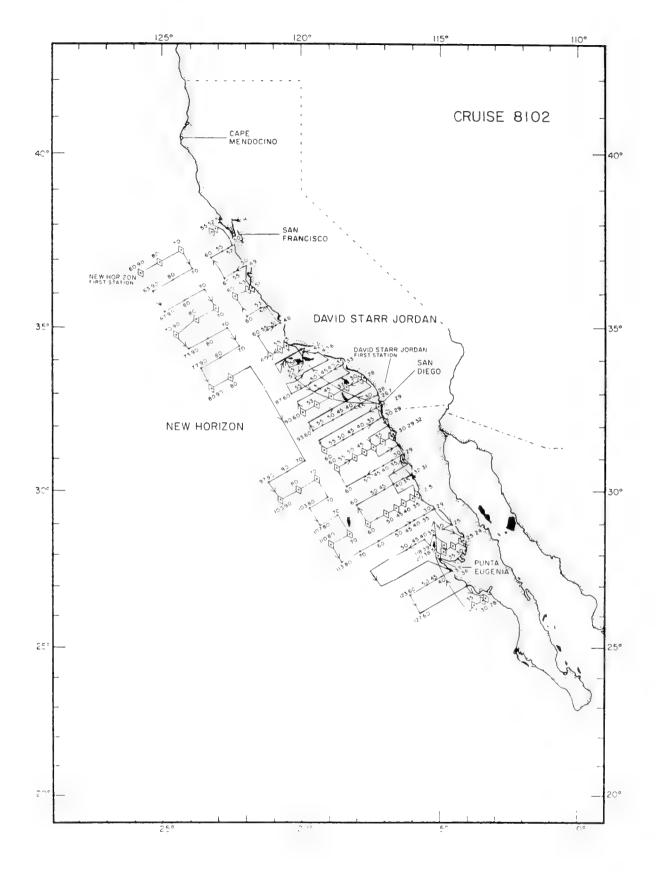


Figure 4. Station pattern for CalCOFI Cruise 8102. Symbols as in Figure 2.

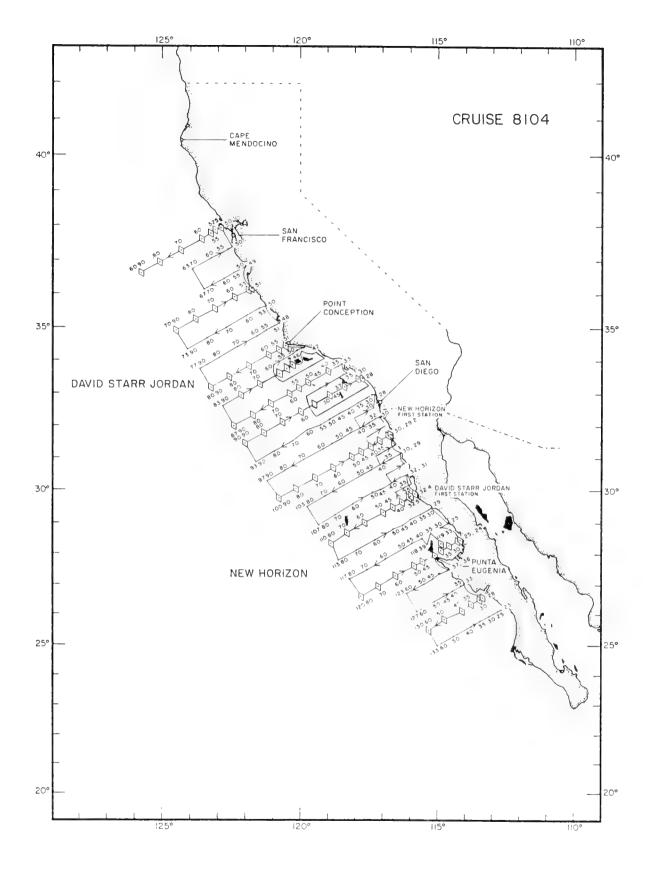


Figure 5. Station pattern for CalCOFI Cruise 8104. Symbols as in Figure 2.

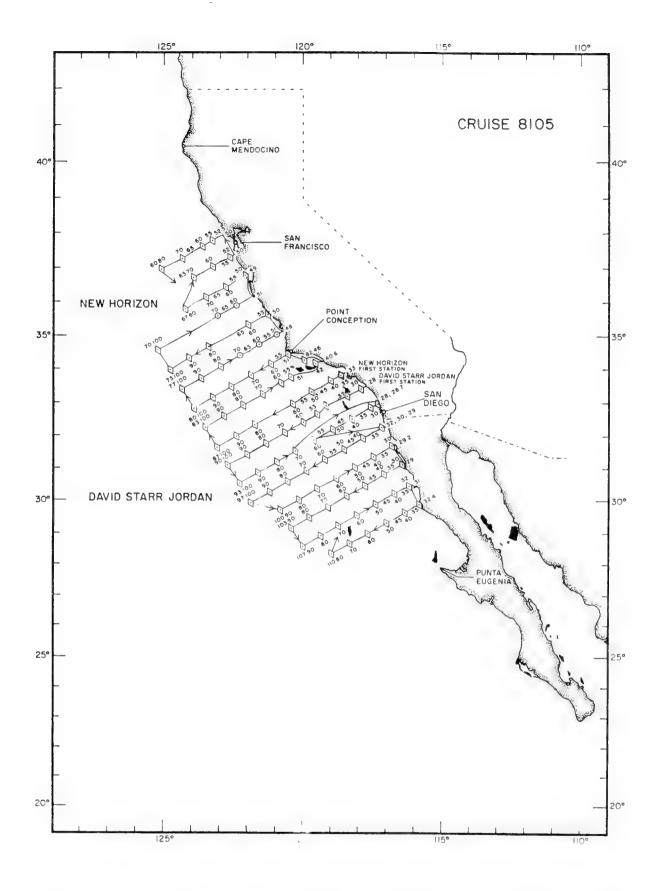


Figure 6. Station pattern for CalCOFI Cruise 8105. Symbols as in Figure 2.

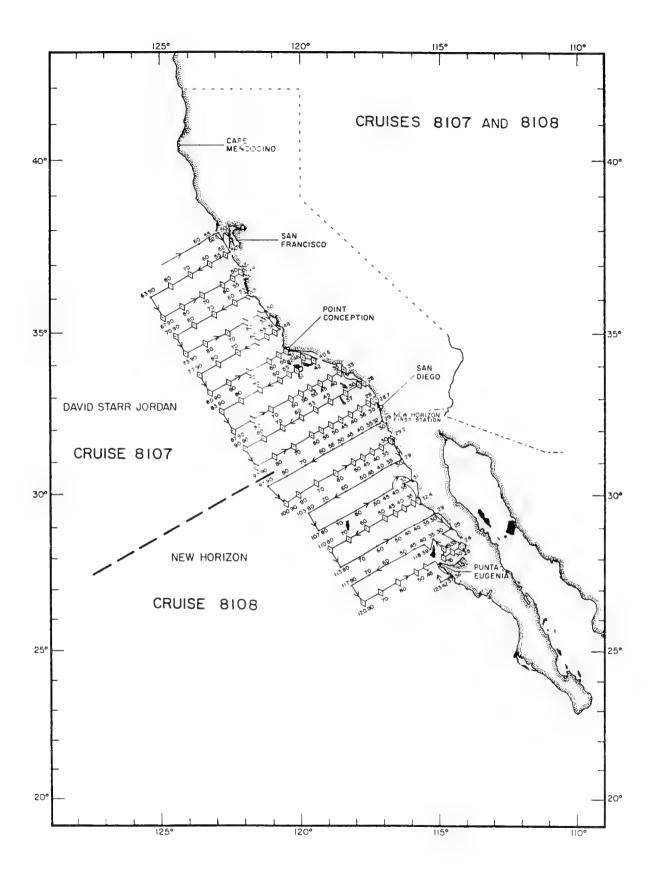


Figure 7. Station pattern for CalCOFI Cruises 8107 and 8108. Symbols as in Figure 2.

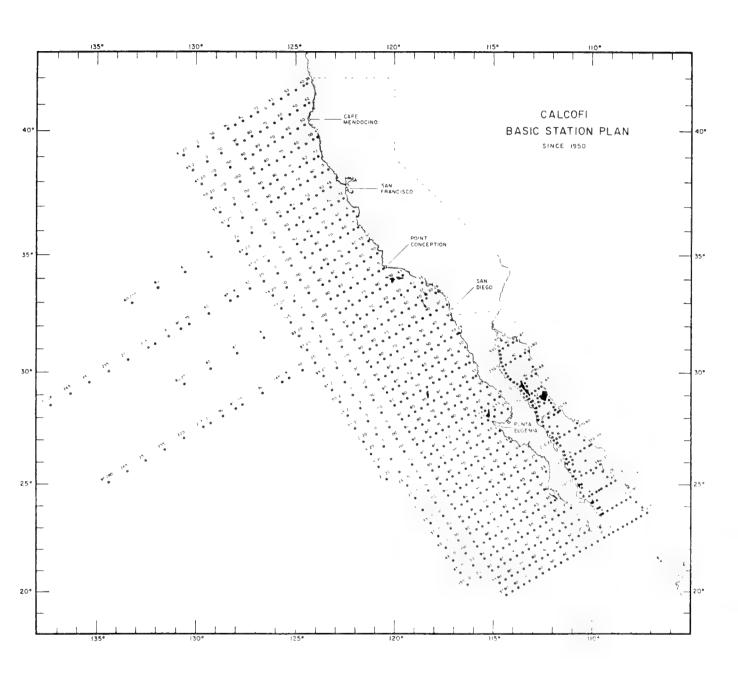


Figure 8. The basic station plan for CalCOFI cruises from 1950 to the present.

Station and plankton tow data for CalCOFI cruises in 1981. Counts for fish eggs and larvae are not adjusted for standard haul factor or percent of sample sorted. TABLE 1.

CalCOFI Cruise 8012

Total Eggs	1075 1073 1167 1170 1170 1170 1171 1171 1171 1171
Total Larvae	8500 8700 8700 8700 8700 8700 8700 8700
Percent Sorted	50 448 50 60 60 60 60 60 60 60 60 60 6
Stand- ard Haul Factor	wvananaavaaavaaaaaavvvaaaavvvvvaavvvvvv vvananaavaaavvaaaaaaavvvvaaavvvvv vvananaavvvv vvananaavvv vvananaavv vvanan
Vol. Water Strained (cu. m)	14444444444444444444444444444444444444
Tow Depth	2222 2212 2212 2212 2212 2212 2212 221
Time (PST)	1099 1019 1019 1019 1019 1019 1019 1019
Tow Date yr. mo. day	880 12 14 880 12 14 880 12 16 880 12 17 880 12 18 880 1
Ship Code	
Long.(W) deg. min.	122 23 37.0 122 37.0 122 37.0 122 37.0 122 37.0 122 50.3 122 50.3 122 50.5 122 50.5 123 55.0 123 55.0 123 66.0 123 66.0 123 66.0 123 7.0 123 7
Lat.(N) deg. min.	33 29 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Station	00000000000000000000000000000000000000
Line	mmmmmmmrrrrrrr000000mmmmmmrrrrrrr00000

CalCOFI Cruise 8012

Total Eggs	1101 1761 1888 1888 1910 1910 1910 1910 1910 191
Total Larvae	100 100 100 100 100 100 100 100 100 100
Percent Sorted	1000.00 1000.00
Stand- ard Haul Factor	$\frac{0}{1} + \frac{1}{1} + \frac{1}$
Vol. Water Strained (cu. m)	3 3 3 4 4 4 4 4 4 4 4 4 4 4 4 4
Tow Depth	11384 11384 11384 11384 11384 11388
Time (PST)	11930 1100 1100 1100 1100 1100 1100 1100
Tow Date yr. mo. day	80 112 09 80 115 09 80 80 115 09 80
Ship Code	EEEEEEEE
Long.(W) deg. min.	1119 57.0 1120 25.5 120 23.8 120 23.8 120 23.8 122 407.5 122 407.5 123 29.7 124 23.6 125 23.6 127 22.8 128 29.7 129 39.7 120 30.4 120 30.4 120 30.4 121 42.8 122 23.6 123 23.6 124 33.2 125 23.6 127 23.6 128 25.1 129 35.4 117 23.4 119 33.2 120 34.3 120 34.3 121 35.4 117 24.3 121 35.4 117 29.8
Lat.(N) deg. min.	33333333333333333333333333333333333333
Station	44446666666666666666666666666666666666
Line	$\begin{array}{c} 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 $

	Total Eggs	24 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
	Total Larvae	0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	Percent Sorted	11000 11000
	Stand- ard Haul Factor	40004040000000004040000000004040404040
	Vol. Water Strained	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
8012	Tow Depth (m)	22222 22222 22222 22222 22222 22222 222222
	Time (PST)	1320 02300 02300 17000 11700 11455 00310 00310 00350 0
CalCOFI Cruise	Tow Date yr. mo. day	80 112 02 03 880 115 06 880 115 06 880 115 07 08 880 115 08 880 115 08 880 115 08 880 115 08 880 115 08 880 115 08 880 115 08 880 115 08 880 115 08 880 115 08 880 115 08 880 115 08 880 115 09 09 880 115 08 880
	Ship Code	555555555555555555555555555555555555555
	Long.(W) deg. min.	1118 09.1 1119 50.2 1120 30.8 1121 10.8 1121 10.8 1121 10.8 113 47.2 113 47.2 114 47.2 115 24.6 116 24.5 116 24.5 117 24.7 118 24.6 119 44.6 119 44.6 111 24.7 110 01.7 111 00.3 111 00
	Lat.(N) deg. min.	31 45. 30 35.34 31 125.44 30 35.34 31 125.44 31 12.33 31 12.33 31 12.33 31 12.33 31 11.22 31 11.22 31 11.22 31 01.22 32 04.66 33 0 27.22 34 0 25. 36 0 36. 37 0 11.22 38 0 20. 39 0 20. 30
	Station	44500000000000000000000000000000000000
	Line	966.77 96

8012	
Cruise)
CalCOFT	1

Total	1040 1040 1040 1040 1040 1040 1040 1040	30 99 14
Total Larvae	1 1 2 2 2 4 2 8 8 8 6 4 4 5 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	14 7 23
Percent Sorted	1000.00 1000.0	000.
Stand- ard Haul Factor	$ \begin{array}{c} \text{RR} \\ \text{RR} $.0
Vol. Water Strained (cu. m)		413 414 423
Tow Depth	2212 2213 2213 2213 2213 2213 2213 2213	211 217 212
Time (PST)	00000000000000000000000000000000000000	54 35 75
Tow Date yr. mo. day	880 12 10 12	0 12 1 0 12 1 0 12 1
Ship Code	686666666666666666666666666666666666666	666
Long.(W) deg. min.	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	14 07. 14 46. 15 24.
Lat.(N) deg. min.	0.000000000000000000000000000000000000	6 09. 5 49. 5 29.
Station	44000000000000000000000000000000000000	000
Line 3	mmmmmmnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnnn	30.

CalCOFI Cruise 8012

Total Eqqs	50 98 1 123 7 7 7 83 63 63 28 29
Total Larvae	36 0 0 21 27 27 27 27 27 27 12 10 0 0 0 0 0
Percent Sorted	100.0 100.0 100.0 100.0 47.2 100.0 100.0 100.0 100.0 100.0
Stand- ard Haul Factor	44.65 50.165 11.76 1
Vol. Water Strained (cu. m)	136 153 444 4417 1009 137 4531 4531 4531
Tow Depth	63 71 211 215 214 211 215 50 65 65 87 213 212 212
Time (PST)	1925 2045 2345 0240 0530 11535 11825 11800 0950 0140
Tow Date yr. mo. day	80 12 17 80 12 17 80 12 17 80 12 18 80 12 18 80 12 18 80 12 19 80 12 19 80 12 19 80 12 19 80 12 19 80 12 19 80 12 19
Ship Code	
Long.(W) deg. min.	112 41.3 112 49.1 113 08.1 113 27.4 113 46.7 115 02.7 112 16.2 112 27.4 112 27.4 113 24.5 113 24.4 114 02.5
Lat.(N) deg. min.	26 09.1 25 55.1 25 45.1 25 45.1 25 15.1 24 55.1 25 33.8 25 33.8 25 29.8 25 19.8 24 59.9 24 39.8
ine Station	23.0 25.0 30.0 30.0 40.0 50.0 50.0 22.0 23.0 25.0 35.0 60.0
Line	133.3 133.3 133.3 133.3 133.3 133.3 136.7 136.7 136.7 136.7

	Total Eggs	1115 66 2	5851		15	⊣	10	0		77	68	7	9	41	٥ ر		13	4 –			51		9	817	٥٣		586	47		638	
	Total Larvae	21 21 38								3	7				20		700			. .		23	1		∩ ₹	r	48	ω α	2	196 234	}
	Percent Sorted	100.0	46.	4	2:	5.	2.	 1 m (v.	00		49.	00. 44.	0	0 <	9	51.	. 0	00.	- 6	00	00	51.	0	00. 53.	. 0	3		0.0	00.	3
	Stand- ard Haul Factor	3.99	7.	. 7	· ε ν	င္ ထ	0.	7.	ي د	4	. m	8	က် အ	9	. 2	0	T.	, O	.5	٦.	0.	٦.	.0	φ,	٠, د	. 0	7	ۍ. د	.0	.5	
	Vol. Water Strained	99 200 255	45		00 -	1 m	NU	0	2 7	9	- O	4		5	٦,	20	7	70	0	NG	7			5	40	ט ע	-	m c		9	
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se	Time (PST)	1205	01	54	0.5	14 32	19	65	44	333	700	51	00	17	30	32	40	35 35	51.	22	64	05	23	75	9 ا	512	82	33	000	54.2	0
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•	Ship	999	355	151	36	ar.	200	200	9	an an	61	d D	95	an an	J.D		db dr	ar.	an	6	35	ar E	g F	JD	JD GE	a c	QD	JD	36	356	7
	Long.(W) deg. min.	122 52.9 123 03.8	23 36.	22 37.	23 11.	21 59.	22 24.	22 46. 21 43.	21 52.	21 15.	21 28.	22 40.	23 21.	20 42.	20 55.	21 11.	22 14.	22 56. 23 38	20 31.	20 48.	$\frac{21}{21}$ 50.	22 32.	19 56	19 24.	19 30.	20 08.	20 45.	21 26.	22 07. 22 48.	18 29.	18 3/.
	Lat.(N) deg. min.	37 56.8 37 51.8	7 36.	7 18.	7 02.	6 49.	6 37.	6 27. 6 10.	6 07.	5 38.	5 32.	4 58.	4 38.	4 16. 5 07.	5 01.	4 53.	4 23.	4 03.	4 27.	4 19.	4 09. 3 49.	3 28.	3 UB.	4 13.	4 10.	3 52.	3 34.	3 14.	2 54.	3 2 3 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	3.49.
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CalCOFI Cruise 8101

Total Eggs	166 166 166 173 187 187 187 187 187 187 187 187	
Total Larvae	15481 16581 16581 1100 11100 11100 11110 1110 1110 1110 1110	
Percent Sorted	50.0 1000.0	
Stand- ard Haul Factor	0440440000044400000444400004400004400044000 11.01000000000000000000000000000000000	
Vol. Water Strained	######################################	
Tow Depth	2015 2016 2016 2017 2018 2010 2010 2010 2010 2010 2010 2010	
Time (PST)	00025 00025 115555 115555 00000 00000 00000 00000 00000 00000 0000	
Tow Date yr. mo. day	81 01 22 81 01 22 81 01 21 81 01 21 81 01 21 81 01 21 81 01 20 81 01 19 81 01 19 81 01 18 81 01 17 81 01 15 81 01 15 81 01 16 81 01 17 81 01 16	
Ship Code	666666666666666666666666666666666666666	
Long.(W) deg. min.	1118 58.5 1119 199.84 1120 000.4 1121 42.9 1121 42.9 1122 23.5 1117 446.1 1119 54.3 1119 54.3 1117 23.7 1117 23.7 1117 23.7 1117 18.3 1118 13.3 1117 14.4 1119 14.4 1117 14.8 1117 14.8 1117 14.8 1117 14.8 1117 14.8 1118 50.3 1117 14.8 1118 50.3 1118 50.3 1118 50.3 1118 50.3 1118 50.3 1118 50.3 1118 50.3 1118 50.3 1118 50.3 1119 50.5 1119 50.5	
Lat.(N) deg. min.	33 39 39 39 39 39 39 39 39 39 39 39 39 3	
Station	4 4 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
Line	886.77 886.77 890.00 990.00 993.33 993.33 996.77 996.77 996.77 996.77	

CalCOFI Cruise 8101

Total Eggs	11 5	20	6	13	173	b0	18	e	6	10	37	46	25	65	22	14	4	7	(68		a i		12			4 C	77
Total Larvae	7 20	10	5	2	55	- T	12					81					φ.	4	4	7	, עב	59	10	C ·	o (1 4	
Percent Sorted	100.0	0	50.	00		000	00	00.	00	00	00	00	00	00.	52.	00	00	00	00	00.	000	00	00	00	00	00	00.	000		.00
Stand- ard Haul Factor	2 8		8	. 7		, (7	6.	. 2	. 2	ω.	0	6.	∞.	0	0	٦,	∞.	m.	ထ္၊	ů	ان	. 7	æ	. 2	٥.	Ţ.	٠,	ي د	7.
Vol. Water Strained (cu. m)	403	pend	N	3	0 <	r —	416	E	$\overline{}$	-	S	-	2	4	ぜ	2	2	3	0	436	9	0	7	4	┥.	m,	$\overline{}$	_ <	403	⊣
Tow Depth	210	213	207	206	212	48	212	212	219	215	209	210	211	14	173	214	217	211	217	211	209	215	28	213	216	215	215	212	217	717
Time (PST)	0815	24	70	04	57	1 L	83	20	13	51	03	54	11	92	72	44	12	20	84	31	80	25	32	73	12	10	45	02	79	14
Tow Date yr. mo. day	81 01 14	01 1	1 01 1	1 01 1	1 01 1	1	1 01 1	1 01 1	1 01 1	1 01 1	1 01 1	1 01 1	1 01 1	1 01 1	1 01 1	1 01 1	1 01 1	1 01 1	1 01 1	1 01 1	1 01 1	1 01 1	1 01 0	1 01 0	1 01 0	1 01 0	1 01 0	1 01 0	1 01 0	1 01 0
Ship Code	dt.	JD	JD	JD	ar E		an Of	JD	JD	JD	JD	JD	JD	JD	JD	JD	JD	JD	JD	JD	JD	JD	JD	JD	JD	JD	JD	JD	JD GE	(IC
Long.(W) deg. min.	117 47.3	18 47.	19 27.	20 07.	20 46.	16 20.	16 44.	17 04.	17 24.	17 44.	18 24.	19 04.	19 44.	16 05.	16 09.	16 21.	16 41.	17 01.	17 21.	18 01.	18 40.	19 20.	15 49.	15 59.	16 19.	16 39.	16 59.	17 38.	18 18.	18 57.
Lat.(N) deg. min.	31 11.0	0 41.	0 21.	0 01.	9 41.	1 08.	56.	0.46.	0 36.	0 26.	.90 0	9 46.	9 26.	0 29.	0 27.	0 21.	0 11.	0 01.	9 51.	9 31.	9 11.	8 51.	9 52.	9 47.	9 37.	9 27.	9 17.	8 57.	8 37.	8 17.
Station	45.0	0	0	0	0.	د	2		5	0	0	0	0	-	2	5	0	5	0	0	0	0	2.	5	0.	5.	0.	0.	0	0
Line	100.0	000	00	00	00	03.	200	03.	03.	03.	03.	03.	03.	90	90	90	90	90	90	06.	.90	.90	10.	10.	10.	10.	10.	10.	10.	10.

	Total Eggs	225333 35333 35333 3533 3533 3533 3533
	Total Larvae	568 113 126 126 126 126 126 126 126 127 127 130 130 130 130 130 130 130 130 130 130
	Percent Sorted	100.00 100.00
	Stand- ard Haul Factor	44664446444646464666646664666446664466644666466646664666466646666
	Vol. Water Strained (cu. m)	00000000000000000000000000000000000000
8102	Tow Depth (m)	143 1988 1988 201 22 22 22 22 21 21 21 21 21 21 21 21 21
ise	Time (PST)	1402 00500 001141 00100 00200
CalCOFI Cru	Tow Date yr. mo. day	81 03 10 81 03 10 81 02 15 81 02 15 81 02 15 81 02 15 81 03 10 81 03 09 81 03 09 81 03 09 81 03 07 81 03 07
	Ship Code	
	Long.(W) deg. min.	123 14.7 124 19.5 125 40.0 122 28.3 122 28.3 122 28.3 122 28.3 123 50.1 123 50.1 123 37.1 123 37.1 123 37.1 123 37.1 123 37.1 123 37.1 123 37.1 123 37.1 124 43.6 127 29.4 128 40.0 129 40.0 121 28.1 121 28.1 122 40.0 123 40.0 121 15.3 122 15.2 123 37.0 123 30.0 123 30.0 121 15.3 122 15.2 123 37.0 123 37.0 123 37.0 120 42.4 121 15.3 122 56.3 123 37.0 123 37.0 124 40.0 125 15.2 127 40.0 128 15.2 129 47.9 120 47.9 120 47.9
	Lat.(N) deg. min.	337 337 337 337 337 336 336 336
	Station	00000000000000000000000000000000000000
	Line S	600 600 600 600 600 600 600 600 600 700 7

8102	
Cruise	
CalCOFI	

Total Eggs	102 314 314 117 372 657 657 691 104 104 104 105 106 106 106 106 106 106 106 106 106 106
Total Larvae	8892 8892 13861 13333 15288 15288 11386 11388 1138
Percent Sorted	\$50.00 1000.00 1000.00 1000.00 1000.00 1000.00 1000.00 1000.00 1000.00 1000.00 1000.00 1000.00 1000.00 1000.00 1000.00 1000.00
Stand- ard Haul Factor	400400040040000040004000044404040404444044404 610866694140011001600001160440086046046400880 96670064110064600000008880480866440086
Vol. Water Strained (cu. m)	44444444444444444444444444444444444444
Tow Depth	22 22 22 22 24 4 1 1 1 1 1 1 1 1 1 1 1 1
Time (PST)	00000000000000000000000000000000000000
Tow Date Yr. mo. da <u>v</u>	881 02 19 881 02 19 881 02 117 881 02 117 881 02 117 881 02 118 881 02 117 881 02 118 881 02 123 881 03 04 881 03 04 881 03 04 881 03 04 881 03 04 881 03 04 881 03 05 881 03 04 881 03 05 881 03 06 881 07 07 07 881 08 08 08 08 08 08 08 08 08 08 08 08 08
Ship Code	88888888888888888888888888888888888888
Long.(W) deg. min.	1119 30 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Lat.(N) deg. min.	333 333 333 333 333 333 333 333 333 33
Station	44.00000000000000000000000000000000000
Line	88333 883333 88677788867773 86677799000 99000 993333 993333 9967779 9967779 9967779 9967779 9967779 9967779 9967779

Total Eggs	22 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
Total Larvae	7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Percent Sorted	
Stand- ard Haul Factor	44464004044460446444444444444444444444
Vol. Water Strained (cu. m)	444 H444444 C444444 444444 444444 C444444 C444444
Tow Depth	212 203 213 213 2111 2112 2112 2112 2112
Time (PST)	00833 00833 11320 00815 00815 11320 011320 011320 01330 00833 0083 00
Tow Date yr. mo. day	81 02 26 81 02 26 81 02 28 81 02 28 81 02 28 81 02 28 81 02 27 81 02 27 81 02 27 81 02 27 81 02 27 81 02 27 81 02 28 81 03 01 81 03 02 88 81 03 01 81 03 02 88 81 03 03 88 81 03 81 81 03 81
Ship Code	EEE6666666EE66666666EEE666666EEEEEEEEE
Long.(W) deg. min.	1119 28 28 20 1116 24 50 51 1116 24 50 51 1116 24 50 51 1117 24 50 51 1117 24 50 51 1118 24 50 51 1118 24 50 51 1118 24 50 51 1118 24 50 51 1118 24 50 51 1118 24 50 51 1118 24 50 51 1118 25 50 51 1118 25 50 51 1118 25 50 51 1118 25 50 51 1118 25 50 51 1118 25 50 51 1118 25 50 51 1118 25 50 51 1118 25 50 51 1118 25 50 51 1118 25 50 51 1118 25 50 51 1118 25 50 51 1118 25 50 51 1118 25 50 51 1118 25 50 51 1118 25 50 50 50 50 50 50 50 50 50 50 50 50 50
Lat.(N) deg. min.	30 21 31 001.0 32 011.0 32 011.0 33 001.0 34 001.0 35 02.0 36 09 001.0 36 09 001.0 37 001.0 38 001.0 39 001.0 39 001.0 39 001.0 39 001.0 30 001.0 3
Station	0.000000000000000000000000000000000000
Line	1000 1000 1000 1000 1000 1000 1000 100

CalCOFI Cruise 8102

Total Eggs	2441	1036	966	281	12	50	709	1975	9	32	28	74	5	510	1351	166
Total Larvae	117	4	92	98	0	25	17	22	0	12	16	49	24	548	27	10
Percent Sorted	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Stand- ard Haul Factor	5.09	3.60	3,31	4.26	4.83	3.59	2.80	4.84	4.87	4.84	5.05	4.78	4.69	4.00	3.08	4.28
Vol. S Water Strained (cu. m) F	199	77	106	199	164	66	104	111	437	443	424	432	454	106	160	483
Tow Depth	101	28	35	85	79	36	29	54	213	214	214	206	213	42	49	207
Time (PST)	0239	1532	1751	1959	0026	2000	0501	0625	0922	1151	1427	1943	0110	1934	2213	0058
Tow Date yr. mo. day	81 03 02	03	03	81 03 01	03	03	03	03	03	03	03	03	03	03	03	03
Ship Code	HN	HZ	HN	HN	N	EN	HN	NH	HN	HN	E	HN	HN	E	EZ	HN
Long.(W) deg. min.	114 52.5	-		114 33.9	L)	0	(L)	m	2	~	m	0	₹7'	7	7	4
Lat.(N) deg. min.	28 17.7	8	8 23.	8 13	8 03.	7 56.	7 27.	7 26.	7 14.	7 09.	6 58.	6 38.	6 04.	6 33.	6 29.	6 20.
Station	33.0	24.0	25.0	30.0	35.0	38.5	36.0	37.0	42.0	45.0	50.0	0.09	0.09	28.0	30.0	35.0
Line S	19.0	20.02	20.02	20.0	20.02	20.02	23.3	23.3	23.3	23.3	23.3	23.3	26.7	30.0	30.0	30.0

8104
Cruise
CalCOFI

	Total Eggs	00000000000000000000000000000000000000
	Total Larvae	123 133 133 133 133 133 133 133 133 133
	Percent Sorted	1000.0 533.0 549.0 510.0 510.0 510.0 500.0 500.0 649.0 640.0 6
	Stand- ard Haul Factor	400000444400000000000440004400444000000
	Vol. Water Strained	104444
8104	Tow Depth	2200 2200 2200 2200 2200 2200 2200 220
Cruise {	Time (PST)	00955 00955 00955 00955 00955 00955 00955 00955 00955 00955 00955 00955 00955 00955 00955 00955 00955
CalCOFI Cr	Tow Date yr. mo. day	881 0 0 4 4 2 2 2 2 3 3 8 8 8 8 8 8 8 8 8 8 8 8 8 8
	Ship	888888888888888888888888888888888888888
	Long.(W) deg. min.	122 52 123 03.8 123 13.1 122 23.9 123 13.1 122 23.8 13.6 5.2 1222 23.6 5.2 1222 23.6 5.2 1222 23.6 5.2 1222 23.6 5.3 1223 23.7 7 7 7 1221 23.2 24.8 1221 23.2 24.8 1221 23.2 24.8 1221 23.2 24.8 1221 23.2 24.8 1221 23.2 24.8 1221 23.2 24.8 1221 23.2 24.8 1221 23.2 24.8 1221 23.2 24.8 1221 23.2 24.8 1221 23.2 24.8 1221 23.3 21.0 24.8 122 24.8 122 24.8 122 24.8 122 24.8 122 24.8 122 24.8 122 24.8 122 24.8 122 24.8 122 24.8 122 24.8 122 24.8 123 24.8 123 24.8 123 24.8 123 25.0 6 123 2
	Lat.(N) deg. min.	337 56.88 337 56.88 337 56.88 337 36.88 337 1122.66 336 237.22 337 122.66 338 23.00 338 23.33 338 239.33 338 239.00 338 239.00
	Station	50000000000000000000000000000000000000
	Line 8	660.00 660.00 660.00 660.00 660.00 660.00 770.00 770.00 770.00 770.00 770.00 770.00 770.00 770.00 880.00 880.00

	Total Eggs	27	-	211		2	9	104	7 4	2	35	o o	\neg	4	104	n v	10	203	22	77	3	5	→	344	3	2. C	63	40	80 .	٥-	427	7	4	> B	80	79
	Total Larvae	132		7	1 (4	Ś		-	9				6		0		5	2		8	9	ηĠ	89		4	4	9		- (20	-		30	886	٥
	Percent Sorted	51.0	6	52.		50.	œ	٠ ص د	٠ د	. 9	7	00		48.	0	, ,		00.	00		00.	6	ب رد	00.	0.	٥	. 0	00	00.	00	- 0	00	00	00	25	·
	Stand- ard Haul Factor	5.11		? .	* (*	.2	£.	.2	٠, ۲	. 2	e.	7,0	0	7	3	٠,	0	4.	Ţ	-, -	.5	Ç,	٥,	. 7	.2	0.0		5	0.	ي د	5	9.	6.	0,4	4.	7.
	Vol. Water Strained (cu. m)	169	0	90	0	9	∞	90	\	10	6	400	0 0	p-4	0,1	> 0	7	0	2		10	6	00	n 0	0	٦,	-	4	2	m,	$\neg \alpha$	∞	0	α۲	390	9
8104	Tow Depth	98	0	0	> -	→ €	0	0	D U	0	\vdash		\dashv \subset	2	$\overline{}$	⊣ 0	ν –	-	~		3	\neg	0	-	-	_ <	> ~	0	\neg					70		0
nise	Time (PST)	1530	50	15	70	41	55	00	77	347	20	84	0.4 5.4	90	64	13	42	52	92	25	ן ד ה	24	10	24°	23	62		40	92	42	11 8	21	34	50	7 47	41
CalCOFI Cru	Tow Date yr. mo. day	1 04	1 04 1	1 04 1	1 04 1	1 04 1	1 04 1	1 04 1	1 04 1	1 04 I	1 04 1	1 04 1	1 04 1	1 04 1	1 04 1	1 04 1	1 04 1	1 04 1	1 04 1	1 04 1	040	1 04 0	1 04 0	1 04 0	1 04 0	1 04 0	1 04 0	040	1 04 0	1 04 0	1 03 3	1 04 0	1 04 0	1 04 0	81 04 06	1 04 0
	Ship	JD	30	JD	d d t	G.	JD DD	JD	an G	מה.	an an	d.	d d t	a Ci	JD	JD	95	an	JD	d G	3 -	JD	dy di	d C	J.D.	J.D		35	J.D	JD		95	JD	HN	Q5	JD
	Long.(W) deg. min.	20 08.	20 45.	21 26.	22 07.	18 29	18 37.	18 58.	19 19.	19 39.	20 21.	21 02.	21 42.	17 46.	17 54.	18 23.	18 56.	19 57.	20 38.	21 18.	17 18	17 23.	17 31.	16 12.	18 33.	18 53.	19 13.	20 14.	20 55.	21 35.	17 20.	17 04.	17 08.	17 08.	117 17.0	17 29.
	Lat.(N) deg. min.	3 52.	3 34.	3 14.	2 54.	534.	49.	3 39.	3 29.	3 19.	59.	2 39.	2 19.	,00	3 25.	3 11.	2 55.	2 25.	2 05.	1 45.	25.	2 54.	2 50.	2 40.	2 20.	2 10.	2 00.	30.	1 10.	0 50.	2 33.	2 17.	2 15.	2 15.	32 11.4	2 05.
	Station			. 0	0	0.0			5.	0		. 0	0		. 0	7.	5.			0			0	. 0		0.	٠. د		0:	0.	0.	2 0	. 0	0.	32.0	5.
	Line				ä	e u	• • u		ė	ه د	ء د	٥	9	o		0.	0			0	٠,	, m	· m		, n	3	د د	ى ب	, m	3	5.	۵ د	9	9	96.7	9

	Total Eggs	60 1102 1102 1103 1103 1103 1103 1103 110	
	Total Larvae	601 548 6627 695 330 330 17144 1715 1715 1715 1715 1715 1715 171	
	Percent Sorted	\$55.0 \$52.0 \$52.0 \$100.	
4	ard ard Haul Factor	$\begin{array}{c} 4400444444444444444444444444444444444$	
100	Water Strained (cu. m)	44800444444444444444444444444444444444	
8104	Tow Depth	2008 2016 2017 2017 2019 2010 2010 2010 2010 2010 2010 2010	
Cruise	Time (PST)	1919 00750 00750 00750 00750 00825 00750 0	
Calcori Cr	Tow Date yr. mo. day	881 04 08 881 04 08 881 04 08 881 04 09 881 04 09 881 04 09 69 69 69 69 69 69 69 69 69 69 69 69 69	
	Ship Code		
	Long.(W) deg. min.	117 28.6 118 09.6 118 10.3 118 10.3 119 10.4 119 10.6 110 10.9 110 44.1 110 24.5 111 20.5 111 20.5 112 44.1 116 24.5 117 24.8 118 44.8 119 24.5 110 04.8 111 24.8 111 24.8	
	Lat.(N) deg. min.	32 05.5 33 155.5 33 1 55.6 33 1 55.6 33 1 25.6 33 1 15.5 34 45.1 35 1 15.5 36 14.9 37 14.2 38 1 15.5 38 1 10.9 39 1 10.9 39 1 10.9 30 10.1 31 10.9 32 11.0 33 1 10.9 33 1 10.9 34 11.1 37 10.9 38 25.2 38 25.2 39 26.3 30 27.5 30 27.5 30 27.5 31 10.9 32 11.0 33 1 10.9 34 11.1 35 25 26 3 36 26 3 37 27 2 38 27 2 38 27 2 39 27 2 30 27 2 30 27 2 31 10.6	
	Station	84448889898888888888888888888888888888	
	Line	96.7 96.7 96.7 96.7 96.7 96.7 96.7 96.7	1

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	Total Eggs	191	7	176	27	160) m	36 0		143	90			9 1		4			m -		4	<u>-</u> و	0	20				~ ~			71	
	Total T Larvae E	118	# @		4		9					19	747	C	117	9	199 85			V 9		7		500		\vdash	5	0	4		100	
	Percent Sorted	100.0		53.		53.	0	50.	00.	00	000	000	00	000	000	00.	000	00	200		00	54		00	α		7:		00	000		00
	Stand- ard Haul Factor	4.82	νœ	4.	٠٣.		. 6	<u>ه</u> ۳		ပဲ ထ	0.	9.	.2	. 7	.0.	2,0) E	Φ,	7.	7.6	. 2	2.	- &	6.	4 6		2.4	- ~		٠, د	9	r.
	Vol. Water Strained (cu. m)	437	J 4	o :-	480	ママ	7	$\omega \phi$	0		2	4	0		* -	5	75	9	1	- و	8	0 <	4 (1)		5 0	74	7	2 0	-	90		7
8104	Tow Depth	211	⊣	4	4		0		0		$\overline{}$		-			0	4	3	∞	\mathcal{L}	0	~ C			70					-	215	0
ise	Time (PST)	1910	51	01	13	61	90	92	34	10	33	22	83	43	14	62	500	93	24	3)	62	93	94	0.5	UL	44	62	2 -	202	35	81	24
CalCOFI Cru	Tow Date 7r. mo. day	81 04 14 81 04 14	1 04 1	1 04 1	1 04 0	1 04 1	1 04 0	1 04 1	1 04 1	1 04 1	1 04 1	1 04 1	1 04 1	1 04 1	1 04 1	1 04 1	1 04 1	1 04 1	1 04 1	1 04 1	1 04 2	1 04 2	1 04 2	1 04 2	1 04 2	1 04 1	1 04 1	1 04 1	1 04 2	1 04 2	1 04 2	1 04 2
	Ship Code y	HE	Z Z	HN	d D	E F	200	EN	E		EN	ZZ	HN	HIN	Z EZ	EN	HZ	HN	N.	E N	E	EN	ZZ	Ē	HN	E E	E	Z Z		E Z	ZZ	HN
	Long.(W) deg. mir.	117 03.0	18 02. 18 41.	19 19.	15 49.	15 59.	15 59. 16 19.	16 19.	16 58.	17 38.	18 57.	15 14. 15 18	15 37.	15 59.	16 36.	17 16.	17 55. 18 34	14 36.	14 55.	15 15. 15 35	15 57.	16 14.	17 31.	18 10.	15 22.	14 52. 14 10.	14 14.	14 54.	15 07.	15 33.	$\frac{15}{16}$ $\frac{51}{30}$.	17 10.
	Lat.(N) deg. min.	30 00.1	9 31. 9 11.	8 51.	9 52.	9 46.	9 47.	9 36.	9 17.	8 57.	8 16.	9 25.	9 12.	9 02.	8 50. 8 43.	8 23.	8 02.	8 57.	8 47.	8 37. 8 27.	8 17.	8 07.	7 27.	7 07.	8 16.	8 25.	8 23.	8 I3.	7 56.	7 43.	7 13.	6 53.
	Station	45.0	00	0.	2:	Š.	0.0	0.	0.	0	. 0	ص د	50	0	0.0	0.	00		0	ر. د	5.0	0.	O	0	9 0	. · ·	5.	÷ ⊔	 n	5.	00	0.
	Line S	106.7	06. 06.	90	10:	10.	96.	10.	10.	10.	10.	13.	13.	13.	7 5	13.	13.	16.	16.	16.	16.	16.	9 2	16.	18.	20.	20.	20.	20.	20.	20.	20.

CalCOFI Cruise 8104

	Total Eggs	71	14 14	80	7	51	360	-1	104	468	136	109	91	41	36	224	629	48	325	88	74	2	22	9/	197	10
	Total Larvae	27	9. Q U U	645	414	406	97	25	224	447	583	273	49	38	71	92	66	51	62	20	09	103	32	58	74	49
	Percent Sorted	100.0	100.0	43.0	51.0	100.0	100.0	48.0	55.0	46.0	50.0	100.0	100.0	50.0	53.0	100.0	100.0	100.0	100.0	47.0	50.0	49.0	49.0	100.0	100.0	52.0
	Stand- ard Haul Factor	0.0	4.28	6.	.5	ဆ	ŝ	0.	8	. 2	. 2	9 •	6.	• 6	۲.	. 2	6.	٦.	9.	0.	0.	æ	æ	æ	9.	0.
	Vol. Water Strained	438	121	432	442	364	456	119	198	412	406	442	440	103	133	417	426	416	460	128	151	364	426	441	459	436
8104	Tow Depth	216	40 64	212	200	211	209	48	77	215	214	207	216	38	69	217	212	215	214	52	61	175	206	213	215	220
	Time (PST)	0090	1722	2134	0005	0310	0880	0090	0415	0105	2151	1834	1328	1040	1256	1543	2033	0120	0755	1130	0940	0620	0310	2323	1807	1256
CalCOFI Cruise	Tow Date T yr. mo. day (04 2	81 04 22 81 04 22	04 2	04 2	04 2	04 2	04 2	04 2	04 2	04 2	04 2	04 2	04 2	04 2	04 2	04 2	04 2	04 2	04 2	04 2	04 2	04 2	04 2	04 2	04 2
	Ship	E	ZZ	H	H	HN	E	HN	HN	HZ	HN	HZ	HZ	HN	HN	EX										
	Long.(W) deg. min.	17 48	114 36.3	14 59	15 11	15 29	1609	14 02	14 10	14 29	14 48	15 07	15 46	13 21	13 29	13 48	14 07	14 46	15 19	12 41	12 48	13 07	13 26	13 46	14 24	15 00
	Lat.(N) deg. min.	6 33.	27 27.0	7 14.	7 08.	6 59.	6 39.	6 57.	6 53.	6 43.	6 32.	6 23.	6 03.	6 33.	6 29	6 19.	90 9	5 49.	5 27.	00 9	6 04.	5 54.	5 45.	5 34.	5 15.	4 57.
	Station	0	36.0		Š	0	0	3	5	0	5	0	C	8	0	5	0	0	0	, ~	ي .		٠. ٠		0	0
	Line S	0	23.3	,	, ~	, m	3	9	٤	9	9	9	٥		0		0	0		٠,	٠.	٠,	٠ .	, ~	, c	,

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	Total Eggs	0	0.0	12		o ~	4 00	4		10	nc	0	5	50	~ 4	20		9	11	ל נ נו		ı es	200	707	111	9	10	7 00	20	96	165	107	99	7		1149	ന	
	Total Larvae	5	7		26						17			27		7	4		- : - :		n o	2 /	19	21	10	18	9,0	5.2	49	6	23	746	19	9 9	48 2	15	129	
	Percent Sorted	5	53.0		0		- 0	51.	e.	-: (6	2	-, c	, 4	. 6	-	٠ 0	د			0	u	i d	0	00.		0	-		ء د	φ.	0.	0		9	
	Stand- ard Haul Factor	9.	4.51	-	8	ໝຸເ	7.0	.0	4	ထ္ဖ	٥٠	. 2	6	٥.	• 4	٠, د	.2	8	. 7	ي د		• 6	7	٦.	? _		9.	ئ. د	• •	.5	ي ر	ن د	. 7	7.	œ.c	.7	9	
	Vol. Water Strained (cu. m)	9	157) 🛁	4.	4	ب م	യ	6	-	417	າ 🗆	9	201	~	_ 0	\cup	S LO	4	ന •	4 L	~ ~	10	410	V г	10	S	$\mathcal{D} \subset$	9	œ	r cu	9-	1 4	-	7	340	9	
COTA	Tow Depth	29	71	4 ~	213	~ (ט עב	83	\vdash	$\overline{}$	211	> ~	٠,-	\neg	0	-	٦٢	٦,	Į	~ ~	⊣ ი	$^{\prime}$	~	7	⊣ -		2	-	٦.		_	0-	10	9	0 -	211		
Se	Time (PST)		0255	00	41	92	200	7 4	35	82	03	300	92	33	33	62	20	13	72	33	77	7 7	24	14	2 ر د	92	81	44	0.4	60	03	42	62 62	15	04	ກ ກ	01	
Calcori crui	Tow Date yr. mo. day	81 06 04	81 06 04	0 90 1	0 90 1	0 90 1	0 90 0	0 90	0 90 1	0 90 1	0 90 0	0 90 1	0 90 1	0 90 1	0 90 1	1 06 0	0 90 1	1 05 3	1 05 3	1 05 3	1 05 3	1 00 2	1 05 2	1 05 2	1 05 2	1 05 3	1 05 2	1 05 2	1 00 2	1 05 2	1 05 2	1 05 2	1 05 2	1 05 2	1 05 2	1 05 2	1 05 2	
	Ship	- Z	EZ	ZZ	HN	N	Ž	N N	E	EN	EN.	H H		HN	HN	E.		E	HN	EN	E E			E	E E	ZZ	N	E		E	HN	Ë	NH	Ë	E .	E E	N	
	Long.(W) deq. min.	52.	123 03.8	23 15.	23 58.	24 20.	25 03.	22 28.	22 50.	23 11.	23 54.	21 59.	22 03.	22 46.	23 07.	23 28.	24 11.	22 22.	22 43.	23 01.	25 11.	21 15.	21 50.	22 18.	23 22.	24 US.	20 42.	20 55.	. 71 17.	21 53.	22 14.	22 56.	23 36.	20 31.	20 48	21 08.	22 31.	
	Lat.(N) deg. min.	56.7	37 51.6	7 46.	7 26.	7 16.	5.56.	7 22.	7 12.	7 02.	6 42.	6 49.	5 47.	27.	6 17.	6 07.	5 47.	5 10°	5 43.	5 33.	4 33.	38.	5 52.	5 08.	4 38.	4 LB.	5 07.	5 01.	4 V V V	4 33.	4 23.	4 03.	3 43.	4 27.	4 18.	4 09.	3 28.	
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Total Larvae	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
Percent Sorted	1000 1000	
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Tow Depth	2211 2211 2211 2213 2203 2213 2213 2213	
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Lat.(N) deg. min.	33 99.0 34 4 16.2 35 4 49.1 36 1 16.2 37 3 4 49.1 37 3 4 4 6.1 37 3 4 4 4 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	
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CalCOFI Cruise 8105

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	Long.(W) deg. min.	117 04.8	17 17.	17 29.	17 49.	18 30.	18 50.	19 10.	20 30	21 10.	21 50.	16 43.	17 06	17 27.	17 47.	18 07.	18 47.	20 07	20 47.	16 20.	16 24.	16 44.	17 24.	17 44.	18 24.	19 04.	20 23.	16 05.	16 09.	16 21.	17 01	17 21.	18 01.	18 40.	19 20.	15 49.	15 59.	
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CalCOFI Cruise 8105

Total	Eggs	12	σ	4	374	348	840	
Total	Larvae	26	50	2	35	55	7	
Percent	Sorted	100.0	100.0	100.0	100.0	47.0	100.0	
Stand- ard Haul	Factor	4.86	4.96	5.23	5.57	5.21	5.16	
Vol. Water Strained	(cn. m)	408	419	404	391	405	412	
Tow Depth	(m)	198	208	211	218	211	213	
Time	(PST)	0625	0160	1335	1945	0210	0825	
Tow Date	yr. mo. day	90	90	90	81 06 11	90	90	
Ship	Code	JD	JD	JD	JD	JD	JD	
Long. (W)		116 19.7	116 39.5	116 59.2	117 38.7	118 18.0	118 57.2	
Lat.(N)	deg. min.	29 37.2						
	Station	40.0	45.0	50.0	0.09	70.0	80.0	
	Line	110.0	0.011	10.0	0.011	110.0	10.0	

	Total Eggs	343 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	
	Total Larvae	32000000000000000000000000000000000000	
	Percent Sorted	100 100 100 100 100 100 100 100 100 100	
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	Ship Code 3	666666666666666666666666666666666666666	3
	Long.(W) deg. min.	1222 1223 1223 1223 1223 1222 1222 1222	
	Lat.(N) deg. min.	33 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	
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	Total Eggs	38 122 11 11 11 19 63 63 63 19 10 10 10 10 10 10 10 10 10 10 10 10 10
	Total Larvae	13 10 10 10 10 10 10 10 10 10 10 10 10 10
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	Stand- ard Haul Factor	0.00000000000000000000000000000000000
	Vol. Water Strained (cu. m)	44499999999999999999999999999999999999
/018	Tow Depth S	1 1 2 2 2 2 2 2 3 3 3 3 3 3 3 3 3 3 3 3
Cruise	Time (PST)	0930 0135 0135 0135 0705 1948 1948 1942 11303 0915 01105 0140 0145 0145 0145 0145 0145 0
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	Ship Code y	666666666666666666666666666666666666666
	Long.(W) deg. min.	1119 30.5 120 08.0 120 08.0 120 24.6 121 26.6 122 48.7 118 29.4 118 29.4 119 19.1 119 19.1 110 19.1 111 22.0 111 24.3 111 24.3 111 24.3 111 24.3 111 24.3 111 24.3 111 18.3 111 18.3 111 18.3 111 18.3 111 18.3 111 18.3 111 18.3 111 31.9 111 31.9 111 31.9 111 31.9 111 31.9 111 31.9
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Total Eggs	2 2 7 7 6 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	14
Total Larvae	2122 22 22 22 22 22 22 22 22 22 22 22 22	30
Percent Sorted	1000.00 1000.00 1000.00 1000.00 1000.00 1000.00 1000.00 1000.00 1000.00 1000.00 1000.00 1000.00 1000.00 1000.00 1000.00 1000.00 1000.00 1000.00 1000.00 1000.00	000
Stand- ard Haul Factor		.0
Vol. Water Strained (cu. m)	UA 444444444444444444444444444444444444	20
Tow Depth (m)	12 200534 65 8 8 9 3 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	7 ~ ~
Time (PST)		943
Tow Date yr. mo. day	888 888 888 888 888 888 888 888	1 07 3
Ship Code		EEE
Long.(W) deg. min.	001841W214W1440840480288400480040184080480	16 38. 16 59.
Lat.(N) deg. min.	115.3 115.3 117.3	9 27.
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	Tota] Eggs	
	Total Larvae	89 117 32 32 110 66 60 60 60 115 115 115 115 110 110 110 110 110 11
	Percent Sorted	53.0 100.0
	Stand- ard Haul Factor	44400400444444444004440440440440440044004400440044000440000
	Vol. Water Strained (cu. m)	444 444444 HE
8108	Tow Depth	2013 2013 2013 2015 2015 2015 2016 2017 2017 2018 2017 2017 2018 2017 2017 2017 2017 2017 2017 2017 2017
Cruise	Time (PST)	0140 0725 11355 0615 0620 0025 1620 11225 1620 11225 1620 1620 1720 1720 1720 0340 0340 0340 0150 11345 11205 11205 11205
CalCOFI Cru	Tow Date yr. mo. day	81 08 01 81 08 01 81 08 01 81 08 03 81 08 03 81 08 03 81 08 02 81 08 02 81 08 02 81 08 04 81 08 05 81 08 05 81 08 04 81 08 07 81 08 06 81 08 07 81 08 06 81 08 06 81 08 07 81 08 06 81 08 06
	Ship Code	
	Long.(W) deg. min.	117 38.4 118 18.3 118 18.3 115 14.0 115 18.0 115 18.0 116 16.5 117 16.5 118 34.3 118 34.3 118 34.3 118 34.3 118 35.7 115 25.4 118 10.7 119 10.7 1115 31.8 1115 31.8 1115 31.8 1115 31.8 1115 31.8 1115 31.8 1116 30.7 1117 48.8 1117 48.8
	Lat.(N) deg. min.	28 36.7 29 25.3 29 25.3 29 25.3 29 25.3 29 25.3 20 25.3 20 25.3 21 26.9 22 8 25.3 22 8 27.2 24 48.3 27 48.3 27 48.3 27 48.3 27 48.3 27 33.7 27 26.8 27 26.8 27 26.8
	Station	422 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
	Line	000mmmmmmmmrrrrrrrrr000000000mmm

TABLE 2. Pooled occurrences of fish larvae taken during CalCOFI cruises in 1981.

Rank	Taxon	Occurrences
1	Engraulis mordax	464
2	Sebastes spp.	431
2	Protomyctophum crockeri	431
4	Leuroglossus stilbius	320
5	Vinciguerria lucetia	287
6	Stenobrachius leucopsarus	282
7		257
8	Bathylagus ochotensis	
9	Triphoturus mexicanus	250
	Citharichthys spp.	213
10	Cyclothone spp.	200
10	Lampanyctus spp.	200
12	Merluccius productus	198
13	Sternoptychidae	183
14	Myctophidae	176
15	Disintegrated fish larva	169
16	Bathylagus wesethi	138
17	Unidentified fish larva	124
18	Symbolophorus californiensis	102
19	Ceratoscopelus townsendi	98
20	Lampanyctus ritteri	97
21	Diogenichthys laternatus	90
22	Tarletonbeania crenularis	89
23	Stomias atriventer	88
23	Melamphaes spp.	88
23	Trachurus symmetricus	88
26	Citharichthys stigmaeus	87
27	Scomber japonicus	86
28	Diogenichthys atlanticus	79
28	Genyonemus lineatus	79
30	Lestidiops ringens	69
31	Chauliodus macouni	67
32	Paralichthys californicus	60
33	Lyopsetta exilis	59
34	Argentina sialis	58
35	Sebastes paucispinis	55
36	Bathylagus spp.	50
37	Gobiidae	44
38	Sardinops sagax	41
39	Bathylagus pacificus	39
40	Parophrys vetulus	38
41	Microstoma microstoma	37
42	Oxyjulis californica	. 34
43	Peprilus simillimus	31
44	Gonostomatidae	30
45	Serranidae	27
45	Diaphus spp.	27
45 47	Seriphus politus	26
		26
47	Pleuronichthys verticalis	20

TABLE 2. (cont.)

Rank	Taxon	Occurrences
49	Cottidae	25
50	Glyptocephalus zachirus	24
51	Poromitra spp.	23
51		23
53	Sebastes jordani	22
	Icichthys lockingtoni	22
53	Sebastes aurora	22
53 53	Ichthyococcus spp.	22
5 <i>3</i>	Chiasmodontidae	21
58	<i>Hypsoblennius</i> spp. Clinidae	20
58	Sebastolobus spp.	20
58	Danaphos oculatus	20
58	Diogenichthys spp.	20
62	Synodus spp.	19
62	Ophidiiformes	19
64	Nansenia candida	18
65	Myctophum nitidulum	17
66	Chromis punctipinnis	16
66	Nansenia crassa	16
68	Pleuronichthys ritteri	15
69	Tetragonurus cuvieri	14
69	Microstomus pacificus	14
69	Sphyraena argentea	14
69	<i>Lampanyctus regalis</i>	14
69	Scopelarchus spp.	14
74	Gonichthys tenuiculus	13
75	Idiacanthus antrostomus	12
76	Scopelosaurus spp.	10
76	Cololabis saira	10
76	Hygophum atratum	10
79	Agonidae	9
79	Paralepididae	9
79	Rosenblattichthys volucris	9
82	Symphurus spp.	8
82	Zaniolepis spp.	8
82	Notoscopelus resplendens	8
82	Sebastes macdonaldi	8
82	Aristostomias scintillans	8
82	Lepidopus xantusi	8
82	Blennioidei	8
89	Hygophum spp.	7
89	Cyclopteridae	7
89	Halichoeres spp.	7
89	Sciaenidae	7
93	Scorpaena spp.	6
93	Hippoglossina stomata	6
93	Macroramphosus gracilis	6
93	Lampadena urophaos	6
93	Bathylagus milleri	6
		9

TABLE 2. (cont.)

Rank	Taxon	Occurrences
93	Electrona rissoi	6
93	Oxylebius pictus	6
93	Trachipteridae	6
101	Sebastes levis	
101	Tactostoma macropus	5
101	Brosmophycis marginata	5
101	Notolepis risso	5 5 5 5
105	Hygophum reinhardtii	4
105	Macrouridae	4
105	Benthalbella dentata	4
105	Syngnathus spp.	4
105	Scopelogadus bispinosus	4
	Atherinidae	4
105 111	Icosteus aenigmaticus	3
		3
111	<i>Xystreurys liolepis</i> Gerreidae	3
111		3
111	Hypsopsetta guttulata	ა ე
111	Coryphaena hippurus	3
111	Stomiiformes	3
111	Scorpaenichthys marmoratus	3
111	Exocoetidae	3
111	Prionotus spp.	3
111	Loweina rara	3
111	Semicossyphus pulcher	3 3 3 3 3 3 3 3 3
122	Haemulidae	
122	Pleuronichthys coenosus	2
122	Scopelarchidae	2
122	Platichthys stellatus	2
122	Girella nigricans	2 2 2
122	Valenciennellus stellatus	2
122	Notolychnus valdiviae	
122	Caulolatilus princeps	2
122	Photonectes spp.	2
122	Cheilotrema saturnum	2 2 1
132	Gonostoma spp.	
132	Physiculus spp.	1
132	Psettichthys melanostictus	1
132	Ophidion scrippsae	1
132	Ceratioidei	1
132	Gempylidae	1
132	Hypsypops rubicundus	1
132	Roncador stearnsii	1
132	Carangidae	1
132	Seriola lalandi	1
132	Ophiodon elongatus	1
132	Aulopus spp.	1
132	Gadus macrocephalus	1
132	Pleuronichthys decurrens	1
132	Pleuronichthys spp.	1
	- 44	

TABLE 2. (cont.)

Rank	Taxon	Occurrences
132	Hemiramphidae	1
132	Hexagrammidae	1
132	Sarda chiliensis	1
132	Evermannellidae	i

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TABLE 3. Pooled numbers of fish larvae taken during CalCOFI cruises in 1981. Counts are adjusted for percent of sample sorted and standard haul factor (see text).

Rank	Taxon	Count
1	Engraulis mordax	484269
2	Sebastes spp.	47046
3	Vinciguerria lucetia	36736
4	Leuroglossus stilbius	25683
5	Merluccius productus	18736
6	Stenobrachius leucopsarus	15640
7	Triphoturus mexicanus	12386
8	Scomber japonicus	7986
9	Protomyctophum crockeri	7277
10	Citharichthys spp.	7082
11	Genyonemus lineatus	6764
12	Bathylagus ochotensis	6308
13	Sardinops sagax	6047
14	Trachurus symmetricus	4013
15	Cyclothone spp.	3663
16	Bathylagus wesethi	2828
17	Disintegrated fish larva	2771
18	Myctophidae	2614
19	Diogenichthys laternatus	2606
20		2315
21.	Lampanyctus spp.	1972
22	Sternoptychidae	1793
23	Sebastes paucispinis	1742
24	Seriphus politus	1633
25	Citharichthys stigmaeus Ceratoscopelus townsendi	1559
26	Unidentified fish larva	1374
27		1354
28	Lampanyctus ritteri	1192
28	Paralichthys californicus Tarletonbeania crenularis	1103
30		1063
	Symbolophorus californiensis	1063
31	Argentina sialis	998
32	Lyopsetta exilis	956
33	Bathylagus pacificus	938
34	Sebastes jordani	900
35	Stomias atriventer	833
36	Melamphaes spp.	822
37	Diogenichthys atlanticus	754
38	Cottidae	697
39	Serranidae	675
40	Oxyjulis californica	621
41	Chauliodus macouni	589
42	Diaphus spp.	559
43	Parophrys vetulus	552
44	Bathylagus spp.	541
45	Gobiidae	518
46	Lestidiops ringens	
47	Peprilus simillimus	442

TABLE 3. (cont.)

Rank	Taxon	Count
4890123456789012345678901234567777778888888888899	Hypsoblennius spp. Glyptocephalus zachirus Synodus spp. Microstoma microstoma Chromis punctipinnis Sebastes aurora Sebastes macdonaldi Pleuronichthys verticalis Icichthys lockingtoni Clinidae Gonostomatidae Diogenichthys spp. Sebastolobus spp. Ophidiiformes Lepidopus xantusi Sphyraena argentea Nansenia candida Ichthyococcus spp. Danaphos oculatus Poromitra spp. Microstomus pacificus Tetragonurus cuvieri Symphurus spp. Chiasmodontidae Blennioidei Pleuronichthys ritteri Nansenia crassa Myctophum nitidulum Lampanyctus regalis Idiacanthus antrostomus Sciaenidae Tactostoma macropus Scopelarchus spp. Hygophum atratum Gonichthys tenuiculus Sebastes levis Scorpaena spp. Agonidae Halichoeres spp. Cololabis saira Scopelosaurus spp. Zaniolepis spp. Notoscopelus resplendens	354 328 321 294 278 277 273 270 259 245 243 230 218 209 199 198 176 169 163 135 133 132 128 119 116 109 107 94 92 92 85 81 77 76 77 77 76 73 73 74 76 76 77 77 76 77 77 77 77 77 77 77 77
90 91 91 93 93	Notoscopelus resplendens Hippoglossina stomata Rosenblattichthys volucris Cyclopteridae Paralepididae Haemulidae	64 61 61 59 59
96	Bathylagus milleri	53

TABLE 3. (cont.)

Rank	Taxon	Count
97	Gerreidae	52
97	Brosmophycis marginata	52
99	Hygophum spp.	48
99	Aristostomias scintillans	48
101	Semicossyphus pulcher	47
102	Oxylebius pictus	46
103	Platichthys stellatus	45
104	Trachipteridae	42
105	Benthalbella dentata	41
106	Lampadena urophaos	39
106	Notolychnus valdiviae	39
108	Hygophum reinhardtii	35
108	Electrona rissoi	35
110	Exocoetidae	33
111	Icosteus aenigmaticus	31
112	Macroramphosus gracilis	30
113	Evermannellidae	29
113	Scorpaenichthys marmoratus	29
115	Stomiiformes	28
115	Macrouridae	28
117	Syngnathus spp.	25
117	Notolepis risso	25
117	Atherinidae	25
117	Scopelogadus bispinosus	25
121	Coryphaena hippurus	24
122	Pleuronichthys spp.	21
122	Prionotus spp.	21
122	Loweina rara	21
122	Girella nigricans	21
126	Xystreurys liolepis	19
126	Hypsopsetta guttulata	19
128	Cheilotrema saturnum	15
128	Valenciennellus stellatus	15
130	Scopelarchidae	14
130	Caulolatilus princeps	14
132	Pleuronichthys coenosus	12
133	Seriola lalandi	11
133	Sarda chiliensis	11
135	Ophiodon elongatus	10
135	Carangidae	10
135	Photonectes spp.	10
135	Pleuronichthys decurrens	10
139	Ophidion scrippsae	9
139	Roncador stearnsii	9
141	Physiculus spp.	5
141	Gonostoma spp.	5
141	Hemiramphidae	5
141	Gempylidae	5
141	Aulopus spp.	5
		3

TABLE 3. (cont.)

Rank	Taxon	Count
141 147 147 147 147	Ceratioidei Psettichthys melanostictus Gadus macrocephalus Hypsypops rubicundus Hexagrammidae	5 4 4 4 4
	Total	738806

ng carcori cruises in 1961. Counts are	I factor (see text). Average number is	h. Unoccupied stations are indicated	
4. Numbers of fish larvae taken on stations occupied dur-	adjusted for percent of sample sorted and standard ha	given for stations occupied twice during a single month. Unoccupied stations are indicated	by a dash.
BLE			

Sardinops sagax

STATION	1	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
3.3.5	-	 			ŀ			1	0.0	ı	1	1	1
		1	0		ı	0.0			1	10.0	1	1	1
3,3		ı			0.0	1	0.	0.0	ı		1	t	1
6.7 3		0.0			•	1			1		i	i	ì
6.7 2					ł	0.0		ı	15.9		í	ı	ı
6.7 3		ı			ı			ı	4	0	ı	1	I
03.3 2		ı				ı	Þ	1			ı	ŧ	ı
03.3 3		l				ı	7.	ı		8	ı	ı	1
06.7 3		ı			0.0	ŀ		1		0	4	I	1
06.7 3		ı				ì		1			1	i	ŀ
.7 3	5.0	ı	9.7	0.0	0	1	0.0	ı	0.0	0.0	ı	1	ı
10.0 3		ı				1		ı			ı	I	i
10.0 3		1			0.0			١		4	1	ı	ı
13.3 2		I		1	ı			i	ı	1		ı	ı
13.3 3		ı		ı	1	0.0		ŧ	ı	1	148.2	ı	1
16.7 2		١		ı	í		0	ı	ı	I	-	ı	1
16.7 3		ı	0	ı	ı			ł	ı	ı	0	ı	ı
20.02		ı	9	ı	1			I	ı	ı		1	I
20.02		ı		1	ı		0	I	ł	1	46.	ı	ı
20.03		ı	4.	ı	ı			ı	1	ı	0	i	ı
20.03		l		ı	ı		14.	i	ı	ı		1	i
20.0 4		ı		1	I	ı		i	ı	ı	0	l	1
20.0 5		l	- 4	1	i	I		t	1	I	217.5	ι	I
23.3 3		I		1	ı	0.0	0	ı	ı	1	5.	1	ł
23.3 5		1		ı	1			I	1	ı	ı	t	l
26.7 3		ı		1	ı	l		1	ı	1	ł	ı	1
26.7 3		ı	4.	ı	ı	ı		1	ţ	ı	ı	ı	ì
30.0 2		ı		ı	į	16.0		I	1	1	ı	ı	ı
36.7 2	4	i		ı	l	I	ı	1	Ι	١	I	1	i
						Engraul	Engraulis mordax	ах					
STATION		NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
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0.0		1	ı	Ť	ı	12.4	0.0	f	•	1	ı	ì	i
0.0		1	1	I	ı		1	1	•	ı	I	ł	1
3.3 5		ŀ	0.		1			ı		ı	Ι	i	ι
3.3 5		i		2	l	53.		I		ţ	I	I	i
63.3 55	5.0	i	20.4	0.0	I	460.8	0.0	1	0.0	I	I	I	1
3.3		ı	0 6	000	ı	19.		ı		I	t	I	í
6.7		1 1			1 1			l (•	I 1	l i	1 1	1 1
0 / 0			90	'n		41.1	÷						

TABLE 4. (cont.)

TATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
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7 60.	ł	8.2	0.0	1	30.2	0.0	ı	0.0	i	t	1	ı
	1	6		ŀ	3		ı			I	ı	ţ
0.0	1		0	ı	$\ddot{}$			ı	10.6	1	1	ł
0.0	ı	0	7	ı	6			1		l	ı	ı
200	í			1	6			ł		1	l	1
	1	5	9	1				ı		ı	ı	ı
3 2 60	ı		9	ı	0	0		1		i	ı	I
3.3 00.	ı	· -	28	ı	99.			1		1	ł	l
6 7 61	ı	101		1	60			ı		ı	t	ı
0.7 5E	ı			t			-	ı	41.	1	ı	ŀ
6 7 60	ı			ı	31.		35.	i		ı	ı	ŀ
6 7 65	ı		•	ı	1		-	ı	1	1	i	ı
7 70	ı			0.0	1	6	-	ŧ		1	ı	I
0.7	l	کا د		•	.960	4	0	ı	39.	I	ı	ı
55.0	j			ı	8338.6			ı		1	I	ı
	4		6	ı	294	0	0	ı	0	ı	1	ł
200	1			١	1	0		ı		1	1	1
2 0 46	l		, [550.	ŀ	20.	0	1	76.	ı	ı	1
3 3 40	ł		30.	113.	ŀ	71.	63.	1		ı	1	ł
3.3 42.	ı	7	499.	4661.9	ı			i	11.	1	I	ı
3.3 51.	ł		89.	341.	ı	51.	25.	1	0	ı	1	ı
3.3 55.	ì		9.	62.	I	53.	œ	i	•	ı	ł	l
3.3 60.	i			1	ł	0	0	1	7	ı	1	ŀ
3.3 80.			0		ı	0	18	1	0	ı	t	ı
6.7 33.		ı	744.	328.	ı	481.	93.	I		I	I	i
6.7 35.		1	75.	95.	ı	00	745.	ı	ກໍ	I	J	i
6.7 40.		ı	737.	307.	ı	782.	88	l	5	ı	I	1
6.7 45.		i	438.	703	I	.757	31.	ı		I		
6.7 50.0	0.0	i	2660.9	2003.8	i	734.0	7./9	I	4. C	1 (l i	
6.7 55.	0	I	4 8 9	38	i	54.	•			ı 1	į	ı
6.7 60.		l		63.	l			1	· -	ı	ι	1
6.7 80.		ı		1 1	 		•	1	-	t	ı	1
0.7				30	ı	854	032	ı	~	1	1	1
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0.0		ı	38.	121	I	46.	6	1	0	ţ	ı	ł
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0.0 80.		ı		ı	ł			1	4	ı	1	I
0.0		ı		ı	ι	5		1	0	ı	1	ŀ
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3.3 28.		ı	63.	551.2	1	4	3	ı	61.	ı	ı	1
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TABLE 4. (cont.)

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99.3 35.6 991.6 4925.5 237.6 995.6			1	! ! ! ! !										
3.3.3 40.0 0.0 13.9 14.9 10.9 <td< th=""><th>$\begin{array}{ccccccccccccccccccccccccccccccccc$</th><th></th><th></th><th>i I</th><th>i</th><th>011</th><th></th><th>925</th><th>379</th><th></th><th></th><th>1</th><th>ţ</th><th>1</th></td<>	$ \begin{array}{ccccccccccccccccccccccccccccccccc$			i I	i	011		925	379			1	ţ	1
33.3 41.6 11.6 <td< td=""><td>$\begin{array}{ccccccccccccccccccccccccccccccccc$</td><td></td><td></td><td></td><td></td><td>14.</td><td>ı</td><td>242</td><td>687.</td><td>1</td><td></td><td>ı</td><td>ı</td><td>ł</td></td<>	$ \begin{array}{ccccccccccccccccccccccccccccccccc$					14.	ı	242	687.	1		ı	ı	ł
33.3 55.0 0.0 136.5 5668.8 1188.0 198.4 0.0 33.3 55.0 0.0 122.5 1286.9 1282.1 0.0	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			ı	· -	766	1	653.	46.	1		ı	ı	ı
3.5 5.5 0.0 1286.5 1286.5 10.0 0.0	, , , , , , , , , , , , , , , , , , ,			ı	30.	608	ı	188.	98.	i		ı	ł	ı
35.3 66.0 0.0 </td <td></td> <td></td> <td>0 0 0</td> <td>ı</td> <td>32.</td> <td>427</td> <td>ı</td> <td>286.</td> <td>09</td> <td>i</td> <td></td> <td>ı</td> <td>ı</td> <td>j</td>			0 0 0	ı	32.	427	ı	286.	09	i		ı	ı	j
3.3.3 80.0 - 27.5 23.0 - 0.0 3.3.3 80.0 - 0.0 - 0.0 - 0.0 3.3.3 80.0 0.0 - 179.4 - 5.0 0.0 - 0.0 3.3.3 80.0 0.0 131.2 - 112.0 1204.2 1412.9 16.0 0.0 - 0.0 <td>, , , , , , , , , , ,</td> <td>000000000000000</td> <td>• •</td> <td>1</td> <td>0</td> <td>059.</td> <td>ı</td> <td>292.</td> <td>0</td> <td>ı</td> <td></td> <td>l</td> <td>ı</td> <td>ı</td>	, , , , , , , , , , ,	000000000000000	• •	1	0	059.	ı	292.	0	ı		l	ı	ı
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96.7 25.0 0.0 112.9 112	90	0000000	1 1 1 i	I	1	1 1	434	1	1	1	ı	1	i	ı
96.7 310.0 131.2 345.0 333.2.5 326.4 96.8 96.7 32.0 16.4 103.2 985.0 7213.1 38.7 45.3 95.8 96.7 32.0 16.4 103.2 985.0 7213.1 38.7 45.3 96.8 96.7 45.0 0.0	2.7	025000	ł I i		-	1	112.	204.	ı	12.	9	ı	ı	ı
96.7 32.0 16.0 15.0 16.0 <td< td=""><td>7 . 7</td><td>200000</td><td>l i</td><td></td><td></td><td>ı</td><td>45,</td><td>332.</td><td>1</td><td>26.</td><td>9</td><td>ı</td><td>ı</td><td>1</td></td<>	7 . 7	200000	l i			ı	45,	332.	1	26.	9	ı	ı	1
96-7-7-55.0 96-7-7-55.0 96-7-7-55.0 96-7-7-55.0 96-7-7-55.0 96-7-7-55.0 96-7-7-55.0 96-7-7-55.0 96-7-7-55.0 96-7-7-55.0 96-7-7-55.0 96-7-7-55.0 96-7-7-55.0 96-7-7-55.0 96-7-7-55.0 96-7-7-55.0 96-7-7-55.0 96-7-7-7-0 96-7-7-7-0 96-7-7-7-0 96-7-7-7-0 96-7-7-0 96-7-7-7-0 96-7-	7.0	30000	ì			ŀ	26.	724	ı	73.	6	ı	ι	ı
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$06.7 \ 32.0 \ - 57.7 \ 106.6 \ 947.2 \ - 5861.4 \ - 10.9 \ 10.9 \ 20.9 \ - 126.6 \ 106.7 \ 4154.5 \ - 5204.3 \ - 10.9 \ 20.9 \ - 1147.7 \ - 0.0 \ 0.0 \ - 154.1 \ - 0.0 \ 0.0 \ - 154.1 \ - 0.0 \ 0.0 \ - 154.1 \ - 0.0 \ 0.0 \ - 154.1 \ - 0.0 \ 0.0 \ - 154.1 \ - 10.0 \ - 154.1 \ - 10.0 \ - 154.1 \ - 10.0 \ - 154.1 \ - 10.0 \ - 154.1 \ - 10.0 \ - 154.1 \ - 10.0 \ - 154.1 \ - $	06.7		ì	•	63.	02.	ı	.216	ł	•	٠ د	1	1 1	<i>i</i> I
$06.7 \ 35.0 \ -126.6 \ 106.7 \ 4154.5 \ -1147.7 \ -0.0 \ 0.0 \ -126.6 \ 106.7 \ 40.0 \ -0.0 \ 0.0 \ -0.0 \ 0.0 \ -0.0 \ 0.0 \ -0.0 \ 0.0 \ -0.0 \ 0.0 \ -0.0 \ 0.0 \ -0.0 \ -0.0 \ 0.0 \ -0.0 \ 0.0 \ -0.0 \ -0.0 \ 0.0 \ -0.0 \ -0.0 \ 0.0 \ -0.0 \ $	06.7	2	ł	57.	06.	941	ı	861.	I	5	•	1	I	
$06.7 \ 40.0 \ - 0.0 \ 20.5 \ 4841.2 \ - 1147.7 \ - 0.0 \ 0.0 \ - 0.0 \ 0.0 \ - 5.6 \ 0.0 \ 50.9 \ - 543.3 \ - 0.0 \ 0.0 \ - 0.0 \ - 0.0 \ 0.0 \ - 0.$	06.7	ů.	ı	26.	90	154.	i	204.	ı		·	ı	ı	ŀ
$06.7 \ 45.0 \ - 5.6 \ 0.0 \ 50.9 \ - 543.3 \ - 0.0 \ 0.0 \ - 0.0 \ 0.0 \ - 0.0 \ 0.0 \ - 0.0 \ 0.0 \ - 0.0 \ - 0.0 \ 0.0 \ - 52.0 \ 0.0 \ - $	06.7	0	i			841.	ì	147.	ı			ı	I	ı
$06.7 \ 50.0 \ -0.0 \ 0.0 \ 0.0 \ -0.0 \ 0.0 \ -0.0 \ 0.0 \ -0.0 \ 0.0 \ -0.0 $	7.90	5.	ı			0.	ı	43.	1		0	ŀ	1	i
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	10.0		ı	9		1	1	18.	ı	0		1	ł	ı

TABLE 4. (cont.)

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STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
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10.0 32.	1				ı	· r o	1			1	ı	ı
10.0 35.	0 0				1	372	1	. 4	4	1	1	ı
10.0 40.			•	. 4	ı	42.	ì		0.0	ı	I	l
10.0 40.	. 1				1	0	- (0		1	i	1
110.0 50.1	1	0.0	0.0	130.1	ı	278.9	1	0.0	1	0.0	I	ı
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10.0	1			77.2		- 4	i		ı		ı	ı
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13.3 30.	1		ı	ı	46.2		ŀ	ì	ı	5.	ı	1
13.3 35.	1		t		ì	÷	ì	ı	ı		ı	í
13.3 40.	1		i	4.7	I	82.	í	I	ı	5.	ı	ı
13.3 45.	1		ı		ı	- 0	ì	1	1	٠. د	ı	1
13.3 50.	1	0	ł		ı		1	ı	ı	4	1	ì
13.3 60.	•		1		1		1	ı	ı		ı	ı
13.3 70	ı		ı		1		ı	l	ı	0	ι	ı
16.7 30.	1		ì		8	45.	ł	ı	I		I	ı
16 7 35	1		1	ι		4	ı	í	ļ	س	ì	I
16 7 40			I	i	4	14.	ı	ı	I	5.	1	I
16.7 45.	•		ı	ı		490.	ı	ı	ı	0	ı	ļ
16.7 50.			I	ŀ	7.	0.	1	ı	1		i	ŀ
18.0 39.			1	ı	3.	075.	I	ı	í	ق	ı	I
19.0 33.			ì	ì	524.3	116.	í	ı	i		1	I
20.0 24.	•		1	I	14.	44.	í	1	i		ı	ı
20.0 25.	•		į	I		e,	ı	1	ı		ı	!
20.0 30.	·		i	ı	98.	51.	ş	ł	i		ı	ı
20.0 35.	•		i	1	0	93.	i	1	i		I	1
20.0 38.			1	ı		539.	i	I	i		1	!
20.0 45.		0	1	ı	ł	45.	I	l	1		1	1
20.0 50.			1	1	1	170.	ł	ŀ	1		1	1 1
20.0 60.			I	ı		14.	ı	i	I			. (
23.3 36.	- 0		ı	ì	47.6		ŀ	ı	ı		ł I	1 1
23.3 37.			l	l		316.	ı	ĺ	1		1	1
23.3 42.			1	I		٠ ٢ .	I	ı (1 1		ı	ı
23.3 45.			i	I		135	I	1			ı	I
23.3 50.			I	1	:	914.	I	i l	1 1	1	ł	١
23.3 60.	- 0	0.0	I	ı		36.	i I	l i	 	1	ı	1
26.7 33.			ł	I	ł	107.	I	ł	l	1		1
26.7 35.			ı	I	ι	4 4 5 5	i	l i		1	: 1	1
26.7 40.	,		I	ı	1	547	ı	i	1			١
26.7 45.			I	1	l	639.	i	ı			ı ı	ı
26.7 50.	- 0		ł	ł		90	i	ı	ì		i	ı
26.7 60.			1	ı	د		!	l	1 -	i i	1	. 1
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TABLE 4. (cont.)

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33.3 25.	1		I	1	í		ı	1	ł	ı	í	I
33.3 30.	6		1	t	i	m 1	ì	I	ı	ı	l	l
33,3 35.	ı		ı	1	ļ	2	ı	í	I	1	ł	l
33.3 40.	i		1	1	ı	4	1	I	ι	1	ı	1
33.3 50.	ı		ı	ı	ı		ı	í	1	I	1	ŀ
33.3 60.	1	0.	i	l	ı	38.8	ı	ŧ	i	ı	1	ì
36.7 22.	ŧ	3	I	i	i	i	1	ı	i i	ı	1	ı
36.7 23.	ı		ı	1	1	ı	I	ı	i	1	ſ	ı
36.7 25.	ı	8	ı	ı	ŧ	ı	ı	ı	ı	ı	ı	ı
					Argentina	na sialis	is					! ! !
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
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2.0 46.	ł	16.6	0.0	81.6	ı	0.0	0.0	1	0.0	i	1	ı
3.3 42.	t	0.	0.		I	0.0		1		i	1	Į.
6.7 35.		ı			ı	22.4		ı		l	1	1 !
6.7 40.	0.0	I		0.0	i	10.7		1 1		ll	! 1	! !
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3.3 100.	I		i	I				1 4	1 0	l	ı	l
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TABLE 4. (cont.)

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16.7 30	0	0	ı	i		D U		1	ı		ı	1
16.7 35	0	Ö	ı	1		٥		ı	1		1	1
16.7 40	0		1	1	1.0	•	l	1	ı		ı	1
16.7 50			t	ı			1		: 1		ı	ı
18.0 39			i	1			1	ı	i		ı	I
20.0 45			ı	l			ı	ı	i i		1	١
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123.3 42.	- 0	10.2	I	ı			1	ı	I		1	1 1
26.7 40			ŧ	ı	ı	11.4	i	1	I	l	l	
				Mic	Microstoma microstoma	micro	stoma					
STATION	NON	. DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
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3.3 80					ı			ı	4.9	ı	ı	ı
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6.7 60	0			t			1			t	l	I
6.7 70	0				1		i		4	I	I	I
6.7 80	0			0.0	ı		l			ſ	t	1 1
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TABLE 4. (cont.)

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Name of the control	STATION	NOV.	DEC.	AN	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
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MILLON NOV. DEC. JAN. FEB. MAR. APR. HAY JUNE JULY AUG. SEP. 13.1 86.10 15.2 86.10 15.3 86.10 15.4 9.10 15.5 9.10 1						Nanseni		da		 	1]
80.0 80.0	STATION	NOV.	l 띪	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.		OCT.
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## Note: The proof of the proof	6.7 90.	I		0.0		ı			1		ı	1 1	
ATTION NOV. DEC. JAN. FEB. MAX. APR. MAY JUNE JULY AUG. SEP. 5.7 90.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	0.0 80.0	Ιı		0.0		1 1			1 1		1 1	1 1	1
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ATION NOV. DEC. JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEP. AND Senia Crassa Nansenia Cra	6.7 80.		I	0.0	1 1	1 1	11.1		1 1		l l	1 1	i 1
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Nansenia crassa Nansen	0.0 100.	•				i i					1 1	1 1	l i
ATION NOV. DEC. JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEP. 6.7 99.0	6.7 90.	t	•	0.0						•			
6.7 90.0 - 21.6 - 0.0 0.0 - SEP. 6.7 90.0 - 0.0 0.0 - 0.0 0.0 - 0.0 0.0 - 0.0 0.0 - 0.0 0.0 - 0.0 0.0 - 0.0 0.0 - 0.0 <td></td> <td></td> <td></td> <td></td> <td></td> <td>Nansen</td> <td>i</td> <td>sa</td> <td> </td> <td> </td> <td></td> <td></td> <td>1</td>						Nansen	i	sa	 	 			1
96.7 90.0	STATION	NOV.	N		FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
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36.7 60.0 - 4.9	33.3 40.	ı		ı	ı	ł	9.7	1	ı	ι	i	}	1
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TABLE 4. (cont.)

Fig. 18 5.10							Bathyle	Bathylagus spp.	o.		-			
22.5.	TATION			DEC.		FEB.			MAY	JUNE	JULY	AUG.	SEP.	OCT.
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10.0		•	1	•	1		ı	1		1	ı	ı	ı	ł
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10			1	0			1			ı		1	i	1
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20.0	7.0		ı	9		_	ò			ı		ı	ı	ı
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6.7 70.0 70.0 10.0 8.8 10.0 8.8 10.0 8.8 10.0 8.9 10.0 9.0 10.0 9.0 10.0 9.0 10.0 9.0 10.0 9.0 10.0 9.0	6.7 4			i			ı		•	ı		1	ı	
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6.7 50.0 6.7 7 60.0 6.7 80.0 6.7 80.0 6.7 80.0 6.7 80.0 6.7 80.0 6.7 80.0 6.7 80.0 6.7 80.0 6.7 80.0 6.8 8.8 6.9 90.0 6.0 0.0 6.0 0.0	6.7		ì	٠		1		•	1	•	0	ı	ı	١
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TABLE 4. (cont.)

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7		1		1		ı	ł	ı	0.0	ı	ı	ı	i
76.7	80.08	1		0.0	0.0	1	0.0	0.0	1	0.0	ł	ı	ı
					Bati	Bathylagus	ochotensis	ensis	1	1			
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0	· -	1		5.		20.2	0.0	i		0.0	ı	ı	ł
0.0	m	ı		82.8	ı	40.6	6		t		1	ı	I
0.0	0	ı	0	2.	1	29.6		0.0	ı		ı	ŧ	1
0.0	0	I		ı	20.7	i	0.0		1	<i>y</i> c	1 1	l	1 1
0.0	0	ı		ł	46. 9.00	ŀ	0	1	l i		1	į	ı
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m r	o,	1	or	۲,	l l				! !		ı	ı	ı
ى د ى د	, n c	1 1		0.10	1	AD . 3	63.2	41.0	1	0.0	1	ı	ı
٠, د	טער	1	-		ı	> 1)		ı		1	1	ı
י רי י רי		ı		117.6	0.0	à	•	1	ı		ŧ	ı	ı
73.3	80.0	1	0.0	6	4.5	ŧ		•	ı	0.0	1	ı	ı
3.3	0	1		10.9	25.6	1 4	9.4	0.0	I		I	1	1 1
6.7	-	I			l	0.0			ı		ŀ	l	

TABLE 4. (cont.)

				Bathylagus ochotensis	gus och	otensis	s (cont.)	•				
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SED.	OCT.
6.7 55.	1	0	11.0		30.7	0.0	0.0		10.7	ì	ì	í
6.7 60.	I	4	0.0	ŧ	9			l	7	I	ł	ı
6.7 65.	I		1 0		ı		10.8	1 1		1 !	I I	1 1
6.7 70.	1 1		30.0	18.4	ı	19.8		_ I	10.4	ì	i	ı
6.7 100	1		1		1			1	•	ı	1	1
0.7	ı		32.2	i	0			ı		ı	ı	1
0.0	ı			1	10.6			ı		1	t	ı
0.0 70.	ı			1	1	0		1		ı	ı	ı
0.0 80.	1		10.2		ı			ı		ı	ı	ı
0.0	ŧ			0.0	1			i		ı	1	ı
0.0 100.	ı		ł		ı			ł		ı	ı	ı
2.0 46.	ł		19.4	0	1			1		ı	í	ļ
3.3 42.	ı	0.0	0.0	18.8	ı			i		ı	i	ı
3.3 51.	1				1			ı		I	t	ı
3.3 55.	ı		19.3		ı		0.	ı		ı	ı	ı
3.3 60.	1	0	9.7	- 1	1			1		1	1	ı
3.3 70.	I		10.1	1	ı		0.	ı		ı	i	ì
3.3 80.	1		21.1	ı	ı			I		1	í	ı
6.7 35.			0.0		ı			1		ı	1	ı
6.7 40.		ı			ı	0		1		ι	1	ı
6.7 45.		i			ı			1		t	1	ì
6.7 50.		1	0		1			t		ı	1	ı
6.7 55.		i			1			1		t	ı	ı
6.7 60.		1	0	0.0	i			ì		ŧ	ı	ı
6.7 70.	0	ı			ı			ı		ı	I	ı
6.7 90.		ł	5.	١	1			ı		1	ì	ı
0.0 30.		ı		12.1	1			ı		ı	1	ı
0.0 37.		1	5.	10.3	i			I		ı	1	ı
0.0 45.		1		5.1	I			1		ŧ	1	ı
0.0 53.		I	4.8	0.0	ı			I		I	I	ı
0.0 60.		I			i		÷.	I		I	I	ı
0.0 70.		l		I	ı			1		I	ı	1 :
0.0 80.		l		I	1			I		ı		
0.0 90.		i			ı			ş i		l I	l	1 !
3.3 26.		i			I		•	l		1	i	I
3.3 28.		i I			l t			l II		l 1	· 1	1
3.3 30.		ı					•	1		i	(ı
93.3 35.0	0.0	l I	0.0	100	l i	, , ,	0 0	i I	0.0		1	1
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3 40.		1 1			- 1			I	0 0	ı	ı	i
2.2	•	ı			t			1		ı	ı	١
3 3 70		ı			í			ì		1	ı	ı
2 2 00				1	ı			ı		1	i	ı
5 7 30.	1	0.0		1	0.0			0.0		1	ı	1
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TABLE 4. (cont.)

					Bathylagus ochotensis	gus och	otensi	s (cont.	(•:	 	! ! ! ! ! !		1
STATION		NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	ocr.
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9	, ro	ı			١		13.1	1	0.0		1	1	į
9	0.	l			ł			ŧ			1	I	ı
6.7	45.0	i	0.0	5,1	ı	4 . 1	30.1	1	10.0	0.0	I	l	1
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96.	'n.	l			1		4 4	1			1 1	1 1	1 1
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03.	5.	ı				ı		i			1	1	i
03.	0	t			0.0	ŀ	2.	ı			I	I	ı
03.	٠.	ŀ					٠	I		•	ı	1	1
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000	L	1 1					T <	. 1	•	•	ı	- {	1
900	n c	1			•	ı		1	•		1	ı	ı
90		1				1		ı			ı	1	ı
90	0	í				ı	6	ı			I	1	ı
10.	5.	ı	-			ţ		ı			ı	ı	ı
10.	0	1	-		- 6	ı		1			ı	1	ı
0.0		ı	-		•	1		l			1	ı	ì
10.	D u	l i	-		0.0	ı i		1 1			1 0	1 1	1 1
	n c	1 1		i i	•	1 1		ı I	1	ı ı	•		ı
16.		ı		1		0.0	i G	ı	ı	1	0.0	1	ı
23.		ı		1	ı	0.0		ı	1	ı	•	1	ì
26.	0	ì	_	ı	1	ı		1	1	ì	1	ı	ļ
					Bat	Bathylagus	s pacificus	icus					
STATION	1	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
60.0	70.0 80.0 52.0	1 1	0.0		55.0 137.2		000	1 1 1	0000	1 1 1	1 1	1 1 1	1 1 1
m m i	00.	1 1	000	0.0	1 1	48.2		l i		1 1) [) [1 1
س س	00	1 1			20.9		11 0	1 i		1 1	t i	i i	1 3
9	0.	1		10.9	1			f	• •	ı	I	t	1
9	3.0	F			ţ	0	0.0	ŧ.		1	1 1	1 1	1 1
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TABLE 4. (cont.)

				Bathyl	Bathylagus wesethi	sethi	(cont.	(
AT	NOV.	: ~	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
03 3 80)			1 1 1	1 4	35.4			í	1	ŧ
3 2 00	ı	0.0	0.0	ı	1	ی (1	ı	0.0	ι	1	1
3 3 100	ı			ı	ı		30.2	1		ł	I	ı
6 7 40	ı	- 4	- 4	ł			-	0		í	ì	I
96.7 45.0	ł	0.0	0.0	t	4.8	20.0	1	10.0	0.0	1	t	1
6.7 50.	ı	,		1		9	ı	0.		ı	ı	ı
6.7 55.	1			1	•		ğ	-		1	1	ı
6 7 60	ı			t			1	5.		ı	ı	ŧ
6 7 70.	ì						ŀ	4		1	i	I
6 7 80.	l			•	1		ł	l.		į	1	ı
6.7 90.	1			0.0	ļ	4	1	6		i	1	ı
00.0 40.	ı			ı	0.0		ı	9.		1	I	ł
00.0 45.	1			ı		5	1			ı	ŀ	ı
00.00 50.	ı			ι	0.0	9	ı	6		ı	ı	l
00.00 00.00	,			i		2	ı	6		1	I	ı
00.00 70.	ι			0.0	ı	ب	ı			I	ı	ı
00.00	1	0			ı	ъ Ж	ŀ	0		1	ı	1
00.00	ı				1		ı	5		1	ı	ı
03.3 35.	1	0			t		ι	0		ı	i	i
03.3 40.	ı			0.0	ł	0	1			i	i	1
03.3 45.	ı						ı			í	ł	1
03.3 50.	ı			I	0.0	0	ı			ı	I	1
03.3 60.	I						1			ł	I	ı
03.3 70.	1	0		0	ı		ı			ł	ı	I
3.3 80.	ı	16.3		0.0	ı		1			I	i	I
06.7 35.	1				ŧ	٠	ι			I	ı	1
06.7 40.	1			•	ì		ı			ı	I	ł
06.7 45.	I				ı	ش	1			ł	I	ı
06.7 50.	ŀ				1	۳,	ı			ı	ŀ	I
09.7.90	1	0			ı	4	I			ı	1	ţ
06.7 70.	1				ı		ı		4	ı	ì	i
06.7 80.	I		•	•	ı	2:	1		•	ı	í	ı
10.0 40.	1				ı	•	í			1 0	i	i
10.0 60.					ł		ı	o.	1		ι	1
10.0 70.					!		I		I		i	i .
10.0 80.	t			0	i	٠	ı		ł		J	l
13.3 40.	1		!		ı	٠	l	ł	i		ŧ	i
13.3 50.	ı		ı		I	٠ د	ì	I	l		I	I
13.3 60.	ŀ		ł		I		l	ł	Í		I	I
13.3 70.	1		I	٠	I	5	ı	ı	I		ı	l
13.3 80.	ı		1				ı	i	I		ı	1
16.7 40.	,	0	ı	ı			ì	1	I		ı	i
16.7 45.	ı		ı	1	0.0	0.0	ı	i	I	0.0	ı	i
16.7 50.	ı	۳,	1	1		0	ì	ı	ı		ı	1
16.7 60.	ι		ı	ı	1		1	ı	ı	7	i	I
16.7 70.	i		ı	ı	ł	4	ι	1	ı	0.0	ŀ	I

TABLE 4. (cont.)

				Bathy.	Bathylagus w	weseth i	(cont.	(1
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
120.0 35.0 120.0 80.0		0.0			0.0	0.0	1 1 1	1 1	1 1	4.6	1 4	1 1
				Leu	Leuroglossus		stilbius					
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
55.		1 1 1		1	0.0	0.0				ļ ļ	ı	1
0.0 60.	1	ı	10.3	1	1		I		1	i	ı	ı
0.0 70.	1	1	1	47.2	1 1	10.3	1 1	, o	1 1	1 1	1 1	1 1
0.0	Ιı	1 1	l l	24.3	l l	19.2	l I		1	1	ı	ı
3,3 55.	l		56.1	1	102.4	0	1	5.1	la la	ı	1	1
3.3 60.	I	0	-	1	77.1	11.6	1	17.1	1	ı	ì	ı
3.3 65.	1 1	0	1 1		1 1		1 1	14.6	ll	1 1	1 1	1 1
3.3 /0.	1 1	0 0	į	62.7	1	•	ı		ı	ı	ì	1
3.3 90.	1		t	20.9	ì	1	1		ı	1	1	ı
6.7 49.	I	0.		ı	28.9	0.0	ı	0.0	ı	ı	1	ŀ
6.7 50.	I	9	•	ı	41.7		ı	٠,	I	I	1 1	i
66.7 55.0	1 1	37 ° 4	24 20 20 20 20	1 1	30.2	56.6	1 1	17.1	1 1	ıi	1 1	ll
6.7 65.	1	. 0	•	1	4		1	Ξ.	ı	ı	ı	ı
6.7 70.	ì		1	43.6	ı	31.0	ı		1	1	ı	ı
6.7 80.	I			52.6	1 0	1 5	ı	0.0	10	ı	1 1	()
0.0 51.	1 1		74	1 1	0	58 2	1 1			1 1	1	ı
0.0 50.	1		446.6	ı	6.6		9.4	1		ı	ı	ı
0.0 70.	ı			10.3			0.0	ı		ı	ı	1
0.0 80.	1		ı	0.0	ł		I	I		1	1	1
0.0 90.	ů.	0	10	30.5	10		1 0	ı !		1 1	† 1	1 1
3.3 50.	1	0 0	71.1	Ι	521.0	42.	10.1	1	0.0	ŀ	ı	ı
3.3 60.	ì	0	80.5	l	10.1			l		I	1	1
3.3 65.	i				١	1 4	10.0	i		4	1	1
3.3 70.	i		333.1	0.0	t 1		1 0	1 1		1 1	1 1	1 1
3.3 80.	1 1	0 (0.0	80 0.00	ı	0.0		ı	0.0	1	i	ı
3.3 100.	ı				1			1		ı	ı	ı
6.7 48.	I		0	I	æ	0		ı		ŀ	1	ı
6.7 51.	l	0.		t	74.	157.9	25	1	31.6	i I	1 1	i i
6.7 60.	ì I	51.1	0.0	1 1	673.4	0.0	35.4	t	0.0	ı	ı	ţ
6.7 65.	ı	0		ł	1	,	0	ł		1	1	1
6.7 70.	ı		10.2	4.8	1	48.9		ı	0.0	1	I	ı
6.7 80.	l				ı	0.0		ı		ı	I	ł

DEC. JA 0.0 0.0 10.2 69.9 10.5 10.5 0.0 5.5 184 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	N. B. O.	MAR.	APR. 0.0	MAY	JUNE	JULY	AUG.	SEP.	OCT.
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85.5.0	.4 65.	ı	4.		I	•	ı	ı	F
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4]	.3 662.	I	56.	2	ı		ı	ı	I
٠,	.0 62.	ł	28.		i	0	1	ł	1
92	.2 97.	1	3	0	ı		I	ı	1
ب	.0 71.	1			ı		ı	1	ı
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#	.2 66.	I	41.	•	I		I	ı	I
90	.3 340.	ı	-:		t		ŀ	ſ	1
9	.2 318.	ė.	300	٠.	1	•	ì		1
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	.7 299.	ŀ	.90	7.	1	0	ı	ι	1
	.1 0.	ı	78.	0			1	ι	į
	.9 20.	ı	41.	2.	ı		i	l	ı
15	.1 72.	1	43.	2.	ı	0	ı	ı	ì
	.9 30.	1	1.		ı		ı	I	i
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				Leuroglossus		stilbius	s (cont.	•				
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
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96.7 30.0	I		2.0	1	4		ı	26.4		ı	ı	ł
6 7 35	ı			1			i	9.		1	I	i
6.7 40.	ı			ı		56.	ı			1	ı	I
6.7 45.	I			ı		10.	ı			I	ı	ı
6.7 50.	í		D.	1		œ	ı	0	10.5	ı	ı	1
6.7 55.	i			1	6		ı			1	l	i
6.7 90.	ı			0.0			1			1	ı	I
00 0 30	ı	- 4		ı			ı	- 4		ı	ı	1
00.0	ı	0		١	39.5	ä	1			I	1	ı
00.0 40.	I		8	ı	ä	39.	ı			ı	ı	l
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00.00	ı		1	ı		•	ı			ı	ı	ı
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02 2 20	ı		F 3		ı	0	ı			1	ı	ı
02.2.26	ı	0			1	8	j		0	ı	ı	1
00.0	ı	•		0 (1	84.	1		- 0	ı	ı	1
03.3 40.	ı	•			ı	23.	ı			ı	ı	1
03.5	ı			•	0.0		1			ı	ı	1
06 7 30	I	•		ď		0	1			ı	i	ı
06.7.35	ı		0 0		1	95.	ı			1	ı	ı
06 7 40	ı	•			ı	07.	ı			ı	I	1
06.7 40.	ı	•		•	ı		ì			ı	ı	i
06.7 50.	I			0	ı	18.	1		- 4	ı	ı	ı
06.7 60.	ı				1	4	ı			ı	ı	í
10.0 35.	ı				ı	4	1			1	ı	1
10.0 40.	1				ı	4	i			I	ı	i
10.0 45.	ı				1	Ϊ.	ì			1	ı	ı
10.0 50.	ı				ı	5.	ı				ı	ì
10.0 60.	ì			0.0	ı		ł		ı		ì	ı
13.3 35.	i		ı		١	4	ı	ı	I		ı	ı
13.3 40.	ı		ı		1	مار د	i	ı	ı	0	ı	ı
16.7 35.	ı		1	1	0.0	_;	ı	1	ı		ſ	i
16.7 40.	í		I	ł	0.0	ο.	ı	ł	i		l	ı
16.7 45.	ł		1	ı	0.0	4	ı	I	1		ı	i
16.7 50.	I		ı	ı	0.0		1	ı	ı		í	t
18.0 39.	í		ι	ı	0.0	7	ı	ı	I		I	l
20.0 45.	i		ı	ı		0	ı	ı	ı	0.0	ł	l I
23.3 42.	I		I	ļ	0.0		ı	í	1		l	l
23.3 45.	ı		I	ı			ł	1	l	ı	í	ŀ
26.7 45.	I		ı	ł	ì		í	ı	t	ı	1	l
6.7 50.	1	0.0	I	ı		4	ı	ì	1	1	ı	I
30.0 35.	ı		ı	ı	4.3		ì	i	I	1	I	ı
33.3 30.	I		i	ı	ł	6	ŀ	1	t	I	ı	ı
33.3 35.	ı		I	i	ł	9	l	١	ı	I	ı	ı

TABLE 4. (cont.)

					Stomi	Stomiiformes	S		 	1	 	
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
70.0 90.0 83.3 90.0 86.7 33.0	0.0	0.0	10.0	0.0	1 1 1	0.00	0.0	1 1 1	10.3 0.0 7.5	1 1 1	1 1 1	1 1 1
					Gonost	Gonostomatidae	ae					1
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	элгх	AUG.	SEP.	OCT.
70.	[] 	10.9		0.0		0.0		ı	ı	1
6.7 80.	1 4	10.1	0.0		0.0	0.0	0.0		0.0	1	ii	1
3.3 80.	1	0.	0.0		ı		0.0	1		1 1	i i	1 1
3.3 90.	1 1	0	0.0	ر د ،	Ιí	0.0	5 C	1 1	0.0	l I	l i	1 i
6.7 55.	ı	0.0	0.0		10.2	0.0	0.0	ı	0.0	1	ı	1
0.0 80.		0	0.0	0.0	1 1	0.0	0.0	1 1	20.4	1 1	ı 1	1 1
6.7 70.		1	0.0		ı	10.5)))	ı	0.0	ı	i	ı
6.7 80.	0.0	1 1	5.2	1 1	1 1	0.0	0.0	1 1	0.0	1 1	1 1	1 1
5.3 70.			0.0	1 1	5.1	0.0) 	0.0		ı	ı	ı
96.7 90.	ı	4	5.3	0.0	ı	0.0	1	0.0		į	1	1 (
00.00	l t		000		! 1	4.0	1 1			ı I	1 1	1 1
03.3 45.	ŧ		0.0	4.9	1	0.0	i	0.0	0.0	i	1 8	1 1
03.3 /0.	1 1		0.0		1 ;	0.0	1 1			! 1	ŀ	ı
06.7 40.	1		0.0		1	0.0	ı			I	1	ı
10.0 45.	l i		0.0		l i	000	1 1		0 0	t I	1 1	1 1
10.0 50.	ı		5.1		1	0.0	ı			ı	ı	1
16.7 35.	I		ı	1	4.7	0.0	1 1	1 1	l i	0.0	l I	1 1
120.0 50.0	1 1	0.0	1 1	1	1	2.0	ı	ı	ı	0.0	ı	1
20.0 70.	ı		ı	ı	1	0.0	ı	i	1		I	i
	:				Cyclot	Cyclothone spp	· d		; ; ; ; ;	 	! ! ! ! !	1 1 1
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
66.7 90.0 70.0 80.0 70.0 90.0 76.7 70.0	1111	0.0 8.7 24.3 0.0	10.2	14.4 0.0 10.2 0.0	1 1 1 1		0.0	0 • 0	00.0	i 1	1 1 1	# I I I
6.7 90. 0.0 80.	1 1		0.0	0.0	1 1	0.0	31.3	1 1	20.2	1 1	1 1	1 1

TABLE 4. (cont.)

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	AUG.	1	1	l	ł	I	I	ı	Į	ı	ı	1	ı	ı	1	ı	ļ	ı	t	ı	I	F	ŀ	ŀ	I	ŀ	I	I	ı	1	I	I	I	i i	. 1	1	t	I	1	ı	1	1	I	ı	ı	ı	
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	JUNE	i	ı	ı	ı	1	1	ļ	ı	1	ı	ı	ı	ı	ı	ı	I	ı	ı	0.0								6							0			•	0	•		0			•	14.2	
(cont.)	MAY		ۍ د ۍ			0			0.0	0		0.0					0			I	1	1	ł	1	1	ı	ı	1	ı	ı	ı	i	I	ı	ı	ı	} [1	1 1	1		1	ı	ı	1	1	
spp. (c	APR.	32.8		0	6	10.6		0	22.2				5.2		1											13.3	9			4		0		4	а 7 г			o c		•	, 0	0			0	44.1	
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	JAN.	0.0	1	0.0	0	20.0	ı	4.9	5.2	0.0		0.0	0.0					0								5.4			1				5.2		• याः			ů (0					4.8	
	DEC.	10.3			0.0			ı	ı	ı	ı	ı	ı	ı	1	1	ı					0.0	•		0	31.3	9.		1		0		5.1	0		90						. 7				11.0	
	NOV.		ı	ı	1	1	ı		0.0				0.0		1	-	0.0	•	ı	1	1	ı	ı	í	1	1	ŧ	ı	ı	ı	ı	ı	ı	ı	1	1	ı	ı	i	í	ı	ì	I	ì	i	1 1	
	TION	06 0	0 100.	3 70.	3 80.	3 90.	3 100.	7 70.	7 80.	7 90.	7 100	09 0	0 80.	0 60	0 1 00.	3 60.	3 70.	3 80.	3 00	7 32	7 40	7 45.	7 50	7 55.	7 60.	7 70.	7 80.	7 90.	7 100.	0 40.	0 45.	0 50.	.09 0	0 70.	0 80.	0 90.	3 40.	3 45.	3 50.	3 60.	3 70.	3 80.	3 90.	7 40.	45.	.7 60.0	
	STA	ic	0	(m	3	3	9	ی د	9	ی د		C			~	(*	י רי	٦ ٦	n u	ی د	9	ی د	9	9	9	9	9	9	00	00	00	00	00	00	00	03	03	03	03	03	03	03	90	90	106.	

TABLE 4. (cont.)

MAY. DEC. JAN. FEB. MAK. APR. JAN. JAN. APR. MAX. JUNE JULY AUG. SEP. L. J.	MOV. DEC. JAN. FEB. MAR. MAR. MAY JUNE JULY AUG. 10.0				1.0.0.1	COLUMN	CLASS	and a	26 75 17	TITALE	TITE V	VIIV	CED	٢
19.4 (1.5) 1.0 (90.0	STATION	NOV.	DEC	JAN.	- HHH -	MAK.	APK.	MAI	CONF	1000	AUG.	obr.	3
15.0	16.0	06.7 70.	å	6		86.0	ł	14.6	ı	5.1	0.0	1	ı	1
135.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	33.5.0	06.7 80.	1		-	25.3	i	16.4	i	5.5	0.0	ı	1	ı
45.0	45.0	10.0 35.	ı			0.0	ı	2.4	ı	0.0		ı	I	ı
95.0	55.7 0.00 0.00 0.00 0.00 0.00 0.00 0.00	10.0 40.	ı				١	0.0	1			1	Į	ı
55.0.0	55.0.0	10.0 45.	ı				i	31.9	ı			1	I	ı
60.0	66.0	10.0 50.	1		0		ı		1			ı	ı	ı
70.0	95.0	10.0 60.	1		0		ı		1		í	0.0	I	1
90.0	95.00	10.07	ı		9		!		ı		ı	4.9	1	ı
35.0	34.4	10.0	1	, c		•	1		ı		1		1	ì
10.0	40.0	10.0	1	·			ı		1	•	ι		í	1
45.0	45.0	13.3 35.	ı	0	l			0			!		ı	ı
9.5. 0.00 0.00 0.00 0.00 0.00 0.00 0.00	55.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	3.3 40.	I		I		1		ŀ	1	i		ı	ı
50.0	56.0	3.3 45.	ì		ł	4	ı		I	ı	ı		I	i
66.0	66.0 0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	13.3 50.	I		ı		i	- 4	ł	ı	1		ı	ı
70.0	70.0	13.3 60.	ι		ı		ı		ı	1	i		ı	ı
86.0	## 14.4	13 3 70	ı	-	ı		١		1	1	ı		ı	ı
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9.0	50.0	10.7 40.	ı		I	. !			ı	ı	ı		ı	ı
50.0	70.0	16.7 45.	I	· .	ı	i	4		ı	ı	ı	•	ı	1
80.0	80.0	16.7 50.	i	ۍ د	I	I		0	I	I	1 1	0	. 1	ı
70.0	70.0	16.7 60.	ı	å	I	ı	ı		ı	ı	ı	•	ŀ	l
80.0	80.0	16.7 70.	1		1	i	i		ı	I	ı	0	í	l
45.0	45.0	16.7 80.	1		I	ı	ı		i	1	ı	9	ı	ı
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60.0 - 31.5 28.1 19.0 - 19.0	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	20.0 50.	ı	0	1	i	i		ı	ı	i		ı	ı
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80.0	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	20.0 70.	i	4	ı	1	ı		1	ı	ì	6	t	ı
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60.0 - 19.8 0.0 0.0 0.0 - 7.1 7.3 - 7.3 - 7.	60.0 - 19.8 0.0 0.0 - 7.1 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6 10.6	23.3 50.	mage.	0	ì	ι			ı	1	I	1	1	i
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45.0	45.0 - 0.0 10.6 32.8 50.0 - 32.8 50.0 - 32.8 50.0 - 32.8 50.0 - 20.0 - 20.0 - 20.0 50.0 50.0 50.0 50.0 50.0	26.7 35.	1	0	ł	l	ł		ı	i	ı	ı	ı	ı
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60.0 - 0.0 0.0 4.9 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	60.0 - 0.0 0.0 4.9 0.0 4.9 0.0 4.9 0.0 6.0 0.0 6.0 0.0 6.0 0.0 6.0	26.7 50.	1		ı	1	i		ı	ı	ı	1	1	1
60.0 - 0.0 9.3 4.0 6.0 6.0 6.0 6.0 6.0 6.0	60.0 - 0.0 9.3 4.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0	26.7 60.	ì		ı	1			ı	1	1	I	ı	1
40.0 - 10.8 0.0 60.0 60.0 60.0 60.0 60.0 60.0	60.0 - 10.8 0.0 6.0 6.0 60.0 6.0 60.0 6.0 60.0 6.0 60.0	30.0 60.	ι		ı	ı	1		1	1	ı	1	ı	ı
60.0 - 5.1 0.0	60.0 - 5.1 0.0	33.3 40.	i	0	i	1	ı		ı	1	1	1	1	ı
60.0 - 4.9	60.0 - 4.9	33.3 60.	ι	5	ı	i	ı		ı	ı	ł	1	t	1
NOV. DEC. JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEP. 60.0 - 0.0 - 0.0 -	Boundation Dec. Jan. FEB. MAR. APR. MAY JUNE JULY AUG 60.0 - 0.0 0.0 0.0 - 5.0 -<	36.7 60.	ı		1	1	1		1	ı	1	1	ı	ı
MOV. DEC. JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEP. 60.0 - 0.0 0.0 -	HOV. DEC. JAN. FEB. MAR. APR. MAY JUNE JULY AUG. 0.0 0.0 - 0.0 0.0 - 8.3 - 0.0 0.0 - 0.0 - 0.0 0.0 - 0.0 0.0 - 0.0 0.0					2	700		(
NOV. DEC. JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEP.	MOV. DEC. JAN. FEB. MAR. APR. MAY JULY AUG 60.0 - 0.0 - 0.0 - 5.0 -	i		1	1	3	anapinos	- 1	c a c					1
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	STATION			JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
3.3 70.0 - 0	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	63 2 60	: I	1				0		-	ı	i	1	I
	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	3.3 00.5	ı I	•	0.0				J		ı	1	ı	1
	3.3 80.0 - 0.0 0.0 5.4 0.0 - 0.0	2.3 /0.			0		0	0.0	0		0	i	ı	1
	3,3 80,0 - 0,0 0,0	00.7	I		0.0	ı	0.0		•	1		1	ı	1

TABLE 4. (cont.)

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	JULY AUG			۽ د		0.0	0	0	0		0	0.	0.	0	0		JULY AUG	0.0			JULY AUG	0.0		•						0.	0.0	٥.	=			1100	11000	110000	110000	110000	1 1 0 0 0 0 1	1100001	1100001	1100001	1100001
(•)	JUNE	 								•		0.0					JUNE	5.1			JUNE	ì	1 0	1							0				000		8 8 H		* * H				8 8 H	8 8 H	8 8 H
s (cont.	A. MAY			.00		٠ ٦	n) C			o ru	0	0	spp.	R. MAY	0.	us spp.	1	R. MAY	- 0.	0 0	0			2	- 0.	- 0.	- 9.	- <u>ī</u> .			000	000	0000	00000	,000m00	000000	000000	0000000	000m00	0000000	0000000	0000000
Danaphos oculatus	MAR. APR		.0.	חפר	10	0	0.0						2 0	0	0	Gonostoma	MAR. APR	.0	Ichthuococcus		MAR. APR	0						0									11 0 0 5	0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	111 0 0 0	1110	111 0 0 0 0 0 0	111 0 0 0 0 0 0 0 0	111 0 0 44 0 5	111 0 0 44 0 5	0.00
Danapho	FEB.		0.0	1 4	0.0	1 1	1			η		c			6	J	FEB.	0.0			FEB.	10.2		1	ı	7 0	C - 1	0.0					4.8	•									* * * * *	* * * * *	
	JAN.	į				0.0	•			0			•				JAN.	0.0			JAN.	1 1					•								0.0										• •
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	NOV.					ļ	ı	ı	ı	ı	ı	ŀ	1	1 1	1		NOV.				NOV.	1 1 1				1	i I	ı	I	l	!	I	ı	ı	1 1	1 1 1	1 1 1 1 1	1 1 1 1 1	1 1 1 1 1 1	1 1 1 1 1 1	1 1 1 1 1 1	1 1 1 1 1 1	1 1 1 1 1 1	1 1 1 1 1 1	1 1 1 1 1 1 1
	STATION		6.7 45.	0.0 90.	3.3 45.	6.7 35.	96.7 50.	00.0	00.00	00.0	03.3 35.	03.3 50.	03.3 /0.	10.0 40.	120.0 70.0		STATION	106 7 40.0			STATION	06 0 02	6.7 90.	0.0 90.	3.3 70.	3.3 90.	96.7 70.	0.00	03.3 40.	03.3 45.	03.3 80.	06.7 45.	06.7 50.	 .07 7.90	06.7 70.	06.7 70. 06.7 80. 13.3 35.	06.7 70. 06.7 80. 13.3 35. 13.3 80.	06.7 70. 06.7 80. 113.3 35. 113.3 80. 16.7 70.	06.7 70. 06.7 80. 113.3 35. 113.3 80. 16.7 70.	06.7 70. 06.7 80. 13.3 35. 113.3 80. 16.7 70.	06.7 70. 06.7 80. 13.3 35. 13.3 80. 16.7 70. 20.0 70.	066.7 70. 06.7 80. 113.3 35. 113.3 80. 116.7 70. 220.0 70.	06.7 70. 06.7 80. 113.3 35. 113.3 80. 16.7 70. 20.0 70.	06.7 70. 06.7 80. 113.3 35. 113.3 80. 16.7 70. 20.0 70.	106.7 70.0 106.7 80.0 113.3 35.0 113.3 80.0 116.7 70.0 120.0 70.0

TABLE 4. (cont.)

				Valen	Valenciennellus	lus st	stellatus					
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
86.7 90.0 100.0 90.0	9.6	0.0	0.0	0.0		0.0	0.0	0.0	0.0	1 1	l t	1 (
				Vi	Vinciguerria lucetia	ria luc	etia					
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
0.0 52.		1 1 1	0.0	1	0.0	0.0			ı	ı	ı	I
6.7 80.	ı	4	1	0.0	ı		ı	0.0	ì	I	ı	ι
6.7 90.	ŀ		ł	9,0	1 1		1 1	10.2		i i	1 1	1
3 3 80.	1 1	÷ -			1	0.0	11.3	1	0.0	1	i	1
76.7 80.0	ı	0.0	0.0	9.2	ı	0.0	16.4	i	0.0	ı	ı	1
6.7 90.	1				1 0		38/91	1 1		1 1	l t	1 1
0.0	1 1	0		0	0.0		7711.7	1 1		1	1	1
	1	0 0	4 0	6.6	1		27.7	ı		ı	I	I
0.0 100.	1			1	1		251.6	1	I	ı	I	1
3.3 55.	I		0.0	0.0	ı		9.4	ı	0.0	f	1	i
3.3 60.	1		0.0	1	I	0	20.6	I	0	ı	1	ı
3.3 80.	ı	0.0	0	I	I	4		1		1	1 1	1 1
3.3 90.				I	I i	٠ د		t I		l ì	1 1	j J
6.7 80.	19.0			1 1	1 1	10.0	100.0	ı	000	1	ı	ı
6 7 100	• • 1	ı		1	ı			i		ı	l	ı
0.0 45.		ı		0.0	1	0.0		ı	0.0	ı	1	ı
0.0 53.		1		0.0	1	0.0		1		I	ı	ł
0.0 60.	5.2	1	0.0	0.0	I	0.0		1	0.0	1	1 1	l I
0.0 80.		I		1	H	7.0		i 1		ı	ı	i
		1 1		l t	1			ı		1	ı	ı
3.3 40.		ı	0.0		1	0.0		1		ı	i	ı
3.3 45.	0.0	i	0.0	0.0	i	0.0		ı	0.0	ı	ı	1
3.3 55.		I	0.0		1	0.0		i		1 1	li	t i
3.3 60.		l 1			1 l			. 1		. 1	1	ı
2.5	• 1			ı	1	20.1		ı	2	ł	ı	1
3.3 90.	l	0.0	0.0	1	ı	0.0		ı	35.8	1	ı	ŧ
3.3 100.	1		!	ł	1	1	-	ı	ı	I	ı	ı
6.7 32.	1			1	0.0	0.0	ı		0	I	1	I
6.7 40.	ł	0.0		ı		0.0	I			I	i	1
6.7 45.	ą.			l		0.0	t	-	n	1	I	1 :
6.7 50.	1 1		0.0	1 1	2.5		l 1	10.1	000	1 1	l I	1 1
6.7 60	t I	n u		1	•	40.00	ı	, LO	• •	1	ł	ı
6.7 70.	1			7.9	•	53.0	1			١	ı	!

	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
00 4 2		l	10	1 .	! ! ! ! ! !] .	3	i	I	i
06.7 80.0	1 1	7.5	10.6	0	ı	8.7	ı	59.0	239.0	ı	ı	ı
6 7 100	i		1	1	í		1	2.	1	ı	1	1
0.0 40.	ı	5		ı			1	9.	79.	ı	ı	1
0.0	ı			ı		9	!		29.	1	1	i
0.0	ı	0	6	1	0.0		ŀ	0	7	ı	1	ı
0.0	1			1		æ	ı		21.	ı	I	ł
0 20.	1		0	0.0	1	ω	I	4.	39.	ı	1	t
0.08	1	. œ			1		ı	7.	55.	ı	ı	ı
.00	1	283.6	136.0	118.8	1	4.5	ı	23.	\sim	1	1	ı
2,50	1		15.		1		ı	0		1	ŀ	l
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.00	1	·	•	ł		63.	ı	7	96.	l	1	1
.3 00.		100	ک ۳	16.	1	4	1	'n	45	ı	ı	ı
.3 /0.	1		. 4	198.0	ı	32.	1	.99		ı	ı	1
.000			•	• • •	ı	1	1	8	1	ı	ı	ı
. 3 90.					ı		ı	5		1	I	ı
. 1 55.		0		0	ı	0 0	1			ı	ı	ı
. / 40°		0		0	ı		ı	4	4	1	ł	t
7 7	1	0 0		23.8	1	0.0	1	0	0.0	1	1	ı
7 60.	ı	9			ı	86.	1			ı	1	1
.7 70.	1	28.		æ	ı		1	56.	34.	ı	l	1
.7 80.	1			5.	ı	20.	ı	÷	. 99	i	ı	ı
.7 90.	1		ī		ı		ì	٠ د		i	ı	ı
.0 35.	ł				t		I		0	1	ł	I
.0 40.	1		5.		I	0	ı			i	ŀ	ı
.0 45.	í	0			i		1		4. c	ı	1	ł
.0 50.	ı	6	5	÷.	ι	4	i	÷ 0		1 1	1 1	1
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.0 70.	l	40.	0.0		I		l	200	1	6	ı	ŀ
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.3 35.	ı	2	í	4 (I		ı	}	1 1	, L		ı
.3 40.	ı		1		ı		i	ì) L	1	
.3 45.	ł		ı	٠,	I	27.	ı	ı	I			. 1
.3 50.	ı	2	i		1	٥	I	t	ı	n c	1	
.3 60.	ı		1	0	ı	36.	ţ	ı	ı	9:	ì	1
.3 70.	ì		ì	51.8	I	873.5	ı	I	l ·	1.200	l I	
.3 80.	i		ı	•		. 70	t	l	ı		I	
.7 35.	i	4	ı	I	0.0		1	I	ı		! !	
.7 40.	ţ	12.	i	į			I	t	I			
.7 45.	I		ı	ı			l	l	f	o -	1	ŧ I
.7 50.	1	32.	ı	ı			1	1	I	. I C	ı	1
.7 60.	ı	37.	ı	í	1		ı	I	i	ė.	ı	l
7 70												

TABLE 4. (cont.)

				STATE	יייייייייייייייייייייייייייייייייייייי	vince guest su succesu	• >					
TATION	NOV.	_	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
6 7 80		1	1 1 1			266.8				396.9		
18.0 39.	1	5	i	ı	0.0		ı	١	ı	0	1	ı
20.0 45.	ı		ł	ł	ı	4.2	ı	ı	1	1.	i	I
20.0 50.	ı	0	ı	1	1		1	ı	i	9	1	ı
20.0 60.	1	87.	1	ı	1	262.6	ı	1	I	79.	ı	ł
20.0 70.	i	9	1	ı	1	0	i	I	ı	0	ı	ı
20.0 80.	1	38.	I	ı	1		ı	ı	ı	. 60	1	ı
23.3 42.	ı	0	ı	ı	0.0	34.3	1	1	1		ŀ	ı
23.3 45.	ı		1	ı			1	Ι	ı	1	ı	ı
23.3 50.	1	0	1	ı	0	133.4	1	ı	1	ı	ı	1
23.3 60.	1		1	ŀ	14.3	105.6	l	ı	ı	ı	ı	1
26.7 40.	1	31.	ı	i	ı	11.4	t	1	1	ı	1	ı
26.7 45.	ı	0	I	ł	1	10.6	ı	ı	ı	ı	ı	1
26.7 50	ı	, ,	ı	١	1	248.6	ı	1	ì	ı	١	i
26.7 60	ı		ı	ı	56.3	108.2	1	ı	ı	ı	ı	١
30 0 40	ı	٠ .	ı	1	i i		1	1	1	i	ı	1
30.05.0	1	·	t	ı	ı		1	1	1	ł	1	i
30.0	ı	٠ ح	ŀ	1	ı	125.8	1	ı	1	ı	ı	1
33 3 40	ı	· -	1	ı	ŀ		1	ι	ı	1	1	ı
32.2 50.	ı		ł	ı	ı		ı	ı	ł	ŧ	ł	i
22.2	1		ı	ı	1	233 1	1	ı	ı	ı	ı	1
36.7 40.	1	0 1	ı	ı	ı		1	ı	1	l	ı	1
36 7 50	ı	, ,	1	ı	ı	1	ı	ı	1	ı	ı	ł
136.7 60.0	ı	285.4	ı	ı	ı	1	ı	1	ı	i	I	ı
					į							
					Sterno	Sternoptychidae	ae	1	1		1	1
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
		1				0 01						
2 2 55	i I		0	•			ı		i	j	i	1
3.3 60.	١	•	* C	ŀ	19.3	0.0	ı		1	ı	ı	1
3.3 80.	1)	0.6			ı		ı	ŀ	1	ı
3.3 90.	1		ı	0.0	1	1	1		i	ı	ı	ı
6.7 50.	ı		0.0	1	10.4	0.0	ı	0.0	í	I	1	ı
6.7 60.	1		0.0	1	10.1	0.0	i		í	ı	1	i
6.7 - 90.	ı		(0.0	1 4	1 0	1 4		1 0	I	ı	t
3.3 53.	l		0.0	I	0.0	0.0	0.0	ı	19.9	í	ı	ı
3.3 65.	1		1 0	1 0	ı	1 0	0.0	í	_	1	ŀ	i I
3.3 /0.	ſ				í		1 0	l i	8.0T	1	ll	1 1
6.7 70.	1 (4.0	l I	0.0		1 1	000	l i	1 1	l t
0.0 70.	ı				ı		0.0	ı	0.0	1	1	ı
0.0 80.	ı			0.0	1			ı	20.4	l	ı	ŀ
80.0 90.0	ı	5.2	0.0	0.0	i	0.0	0.0	ı	0.0	ı	1	1
3.3 51.	l		•	0.0	i			ı	0.0	ı	ı	1

TABLE 4. (cont.)

	OCT.	ŀ	ı	I	1	H	1	ļ	. 1		1 1	1	l	I	ı	١	ı	ı	ı	ı	ı	1	ı	i	i	1	ı	ì	ı	١	ı	1 1	: 1	ı	ł	ı	1	ı	I	1	ı	ı	1	ı	1	1	
	SEP.	ı	1	ı	I	1 1	i I	I	l I	ł I	l 1	1	!	ı	ł	ı	1	1	1	ı	ŧ	ı	1	1	ı	ı	ı	ŀ	ı	I	ŧ	i	l	1	ı	1	1	ı	ı	ı	1	ı	ı	1	ı	i	
1	AUG.	į	t	I	I	H)		1	1	1	ı	ı	ı	ı	ı	ı	ı	ı	ı	1	1	ì	ı	١	1	ı	I	1	i	ı	ı	1		I	1	ı	ı	١	i	ı	+ 1	ı	1 1	1	ı	
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(cont.)	MAY	0.0	4.8						•					0	0									ı	1	ι	i	ı	ı	ı	ŀ	ı	ı	ł) 1	1 1	(ı 1		1 1		1 (ı	ŧ I		ı	
	APR.		2			· ·			•		0.0		15.5						5.		0		- 0				- 4					· 0		0		8	4									40	•
Sternoptychidae	MAR.	1	i	ı	I	1	t	i	ı	1	1	ı	ł	I	ı	1	ı	ı	ı	i	ı	1	ı				0.0	S,		0	I	ł		•		•	0		4	1	l	i	I	1		0.0	
Ster	FEB.	+		0.0	•	ı	1		6.1			ı	1		0				0.0		•	ì	ł	ı	ı	ı	ı	١	i		7.9			1	1	1	ı	1 1			4 (÷.	15.1	,	1 4	
	JAN.	0.0			0.0	0			0.0								-							0											4	6										7.0	•
	DEC.	0	11.0	ı	ı	ı	I	ı	ŀ	ł	t	J	1	ı	ı	ı	ì	1	ł	ı	1						0.0												•		•					15.0	,
	NOV.		ı	0	20.4	Ş.	₹		0.0									•	0 1	0		•	ı	1	ı	1	ı	1	ł	1	ı	1	ı	ı	ı	!	1	ł	i	{	i	ţ	1	ı	I	ł I	
	2	1 0	0.06	20	0	0	90.	0	0	7	5.	0	0	0	26.	œ			· -				ے ڈ		ر ا	·	2	C	0	0	0.	0	0	0	٠	<u>.</u>	5			· 0	0	O	2	0.	٠ د	· •	•
	STATION	1 0	0 ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° °	9	9	9	9	9	0	0	0.	0	0	0.	ام)	, ~	, , ,	ה	,			, , ,	, ~	٠,		•	و د	ی د	9	9	9	9	6.	00.	00	00	00	00	00	00	00	00	03.	03.	03.	ى د	00

TABLE 4. (cont.)

				Stei	Sternoptychidae (cont.	hidae (cont.)			 		9 9
	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
3 70		1 4		22.4		0.0	l l	38.4		1	1	i
07 2 20					ì	0.0	1	0.0		1	1	1
06 7 35	-				ı		1		•	i	1	ι
06 7 40	- C			•	1		1			1	ı	ł
06.7 45	1		0.0	5.1	I	8.8	1	6.7	4.6	ı	ı	I
06 7 50	-				i		1			1	1	ı
06 7 60					ı	- 4	ı			ı	1	ı
06 7 70	-				ı		1			ı	ł	i
06.7 80	-	0		•	ı		1			ı	ı	ı
10 0 35	-			0	ı		ı			ı	i	ı
10.045					ŧ		ı			ı	I	i
10.05	-				ł		i			1	ı	ı
10.06					ı		ı				1	i
10.0				0	ı		1	0	i		ı	•
0.01			٠ ـ ا		1		i		ı		1	1
13 3 36				7	1		ı	ì	ı		1	1
22.2		•	ı		1		1	ı	ı		1	ı
13 3 45			1		1		ı	I	ı		1	ı
12 2 50			1		ı		ı	ı	ì		1	1
13.3 60			1		ı		ı	ı	ı		ı	ı
13 3 70			ı		ı		ı	ş	1	4	ı	i
16.7 40	0		ı	1	4.6		ı	i	1		ı	ı
16.7 45	0		ì	ŧ	0.0		1	ŧ	1		I	ı
16.7 50	00	-	ı	ı	0.0		1	1	ı		i	ı
16.7 60	1	19.6	I	ı	ı	0.0	1	ı	ı	0.0	1	ı
16.7 70	0	6	1	ι	ı		ı	ı	i		ı	ı
20.0 50	0	0	ı	1	ι		ı	ı	I		ı	I
20.0 60	0		1	1	į		ı	ı	ı		i	I
20.0 70	0		ı	ı	1		1	ı	í		ı	I
23.3 42	0		i	l	0.0		ı	1	ı		ı	ı
23.3 50	0		i	ŧ	0.0		ł	I	ı	I	ı	ı
26.7 45	- 0.		ı	ı	i		ı	1	I	ı	ı	í
26.7 50	- 0.		å	ı	ŀ		ì	1	1	1	ı	ı
26.7 60	- 0.		ł	ı	0.0		ı	1	ı	ı	ŀ	ı
30.0 35	- 0.		ŧ	1	0.0		ı	ı	F	ţ	ı	ı
30.0 40	0		ţ	ı	ı		ı	ı	ı	ı	ı	ŧ
30.0 50	- 0.		ł	ι	ł		ı	í	i	1	I	ı
30.0 60	- 0.		1	ı	ı		1	ı	I	ı	ı	ı
33.3 50	0.		1	ı	ı		ı	1	ı	ı	ı	ı
33.3 60	0		ı	ı	I		ı	1	ı	1	ı	I
6.7 50	0		1	ı	ı	ı	ı	ı	i	ı	1	I

TABLE 4. (cont.)

TATION	NOV	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
0 70	1	1	1	15.7	ı	10.3	1		I	ı	ŀ	l
0 80.	í	ı	ı	7.2	ı	0	1		ı	ı	ı	ı
3 70.	ı		1	8.3	i		1	9	ι	ŀ	ı	ı
.3 80.	1		1	17.9	ı		ι	10.5	ı	ı	ł	l
7 50.	ı			1			ı		l	I	í	i
.7 55.	1		0.0	ı	0.0	0.0	1		t	1	I	ı
.7 60.	ŧ			ı			l		١	i	ı	1
.7 70.	ì	0		•	ì		ı	0	ı	I	ı	ı
7 80	ı		1		ı	i	ı		ι	ı	i	ŀ
7 90.	ı	0.0	1	0.0	ı	1	i	0		ı	ı	i
0 70.	ı		1		1		0.0	i		ı	ı	i
0 80	ı		ı		1	5.6	i	i	0.0	1	t	t
06 0	1		1		ı	20.4		1		ı	1	i
3 2	ł		0.0		0.0		0.0	i		1	1	ı
200	ı			ı	ı			ı	ì	ł	ı	ı
.07	ı	• 1		•	1	9		ı		i	ı	ı
	ı		•		i			ı	0	ı	ı	ı
.00 .00	ı	•		0.0	1			ı		1	ı	ı
.00	1		•	•	0.0	-		ì		ı	ı	ŀ
7 80.	ı	•		4				i		ı	1	I
.00	I		0.0	0.0	1	0.0		ı	10.1	1	1	ı
7 100	ŀ	•)) 	•	1		0	1		ı	ı	١
.0 70.	ı			ı	1	10.2	0.0	i	0.0	1	ı	i
.08 0.	ı				ı			1		1	I	i
.06 0.	I	0.0		0.0	ŀ			ı		ı	1 1	1 (
.3 60.	ι			ŀ	ı			1		1	1 1	ı
.3 80.			٠	1 6	ı	6		l I	0	 	1	ı
.7 55.		I	•	0.0	ì		•	۱ ا		ı	ı	ı
. / 60.		ı	•	0.1	1		•	i		1	1	1
7 80	۳ ک ک	 		ı	ı	0.0	•	i		ı	i	1
. 00		ı	• •	1	1		0.0	ı		ı	ı	1
0 90	•	ı		0.0	1			ı		ł	ı	ı
06		i			ı			t		ı	ı	ł
0 100.	•	ı		ı	1			i	I	1	ı	ı
3 30.		ı			1	4		ı		ı	ì	ı
.3 60.		I		0.0	1	•		1		ı	I	I
.3 90.						•		ı		ı	ı	ı
.7 35.0	1	0.0	0.0	I	0.0	0.0	I	6	0.0	I	I	1
.7 45.	I			I			ı			1	1	
.7 50.	i		•	ı		•	ì			1 1	1 1	ı ı
.7 55.	i		•				I			1 1	l I	1
.7 70.	l	0.0		0.0	i 1		1 1		0.0			1
.7 90.	ı		•		1 1	0	ı	•	•	ı	ı	1
.7 100.	1	1 6		I		1	ŀ	0				
3			_	١	c	_ _	1		0.0	ı	1	1

TABLE 4. (cont.)

				Chaul	Chauliodus macouni	couni	(cont.)				
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
07 0 00	 	1	0.0	0.0	l	9.3	1	0.0	0.0	ı	ı	ı
0.06 0.001	1	0.0	0.0	0.0	80	4.5	ı	0.0	0.0	1	ì	ı
03.3 45.	I		0.0	4.9	ı	0.0	ı	0.0	0.0	ı	I	ı
03.3 60.	ı		0.0		0.0	0.0	ı	0.0	0.0	ţ	I	F
.07 7.90	ŧ		0.0		ţ	0.0	ı	0.0	0.0	1	ı	ı
10.0 50.	1		0.0		١	0.0	í	0.0	5.1	1 4	I	1
13.3 45.	i		ŀ	0.0	I	0.0	i	ı	ı	0.0	i	ı
				Idia	Idiacanthus	antrostomus	stomus					
AT	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
0.0 80.				0.0	i i ! ! 1 	0.0	 		25.2		ì	1
3.3 70.	ŧ		0.0	0.0	1	0.0	ı	1	10.8	ı	1	1
0.0	ı		0.0	0.0	1	0.0	0.0	ı	5.3	i	1	1
3.3 80.	i		0.0	1	1	5.4	0.0	ı	5.1	ı	i	ı
6.7 70.			0.0	ı	1	0.0	ı	ì	0.0	ı	I	ı
0.0 60.	0.	ı	10.3	0.0	ı	0.0	0.0	ı	0.0	I	l	1
0.0 100.	1		1	I	ı	1	5.4	ı	1.4	ı	ı	ı
3.3 80.	I	0.0	0.0	ı	ı	0.0	0.0	ı	5.1	1	1	ı
3.3 100.	1	1 0	1 9	10	ı	1 9	10.1	(1 9	i 1	1 1	i i
	1 1	10.1			1 1	0.0	ll	0.0	0.0	1		i
			•) •)			
				Arist	Aristostomias	i i	scintillans	 				1 1
	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
3.3 90.			5.0	ì	1	0.0	0.0	ı	0.0	ł	1	ì
6.7 100.	ı		1	ı	1	t	5.0	í	1	1	i	1
6.7 90.	1		5.3	0.0	ŧ	0.0	I	0.0	0.0	ı	I	ł
00.00	ı		0.0	ı	0.0	4.1	ı	0.0	0.0	i	1	1
00.00	1		0.0	9.1	1 0		ı	0.0	0.0	I	ı	i
03.3 60.	ı		0.0		9.6		ı	0.0	0.0		1	. :
113.3 40.0	ΙI		1 1	γ. α	1 1		1 1	l I	1 1	0.0	1 1	1 1
10.0												
					Photonectes	ctes spp.	p.			 	 	1 1 1 1
TAT	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
76.7 90.0	1 1 (1 1 1 1	0.0	0.0	0.0		0.0	5.2	10	0.0	1	1	i
3.3 80.	I		0.0	4.5	I	0.0	1	0.0	0.0	I	I	ı

TABLE 4. (cont.)

	OCT.	ı	l	ı	1 1		1	OCT.	ì	ļ	ı	i i	ı	ı	i	1 1	١	١	1	ì	1 1	ı	ì	ı	1 1	1	1	I	ţ	l	l i	ı	i	ı	ı	1	l	1 1	
	SEP.	1	1	ı	1 1	l		SEP.	1	ı	ı	!!	ı	ł	ı	ll	ı	ı	l	1	1 1	ı	ı	1	1 :	1 1	t	1	ı	ł	1 1		ı	1	ı	ı	ı	l t	
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a macropus	APR.		0.0	0		ł	atriventer	APR.	0.0	•					0		- 4	. د						0		4	4				·.					9		0.0	
Tactostoma	MAR.	ţ	ı	ı	1	ı	Stomias a	MAR.	0.0	•	1	ě	1 1	ı	ı	1	1				5.2	6	6	ŀ		0.0		1	I		0.0		Į	1	ı	ı	í	1 1	
Tac	FEB.	1	0.0			ı	St	FEB.		ı		e e e		0 0) 	5.1		ll	ı	ı	1	1 (8.7		1		0.0			1	1 4						5.1 0.0	
	JAN.			0.0		ı		JAN.	10.7	1	0.0					0.0							• •					0 0						6			9°	26.8 0.0	
	DEC.	1	0.0		4	ŀ		DEC.	0 0	6	ı	1	1 1	1 1	ı	1			0.0															•				0.0	
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TABLE 4. (cont.)

				Stomia	Stomias atriventer	renter	(cont.	() 	! ! ! ! ! ! !	1	
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
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10.0 60.	I		5.1		ı	n°n	ı	0.0	I	0.0	I	l
10.0 70.	1		0.0		ı	4 0	ı	0.0	1	0.0	i	ı
13.3 35.	1		ı		ı		ŀ	t	ì	0.0	1	ı
13,3 40.	í		ı		I	0.0	ł	ı	ı	5°0	ı	I
13.3 45.	ı		1		ı		i	ı	ı	0.0	ı	1
13.3 50.	í		1	15.3	i		1	1	ì	0.0	ı	ı
13.3 70.	1		ı		i	5.0	ı	1	i	0.0	ı	ı
13.3 80.	ı	2.	1		t		i	1	ı	0.0	I	ı
16.7 60.	ı		ı	ı	1	47.1	ı	ı	ı	5.4	ì	ı
16.7 70.	ı	0.	ı	1	ů,		1	ı	ı	0.0	I	ı
16.7 80.	1		ı	1	1		t	ı	ŀ	0.0	i	ì
20.0 50.	ı		1	1	ı		1	1	ł	9°9	1	1
20.0 70.	i		1	1	ı		ı	ı	ı	0.0	1	I
23.3 45.	ı		ı	1	0.0		1	ı	ı	ŀ	i	i
23.3 50.	1		ı	1	0.0		ı	ı	ı	ı	ı	Į
23.3 60.	1		ı	ł			ı	1	ı	ı	ı	i
26.7 50.	1		ŀ	I	1		ı	1	ì	ı	ı	ı
26.7 60.	1		į	ı	0.0		ŀ	i	ı	1	i	ı
30.0 35.	ł	0	999	ı	4.3	0.0	ı	ı	I	ı	ı	i
30.0 50.	ι		ł	ı	ı		i	ı	ı	I	ı	ı
133.3 40.0	i	0.0	1	1	ı	4.8	1	1	1	ŧ	ı	i
33.3 60.	1		1	1	ı		ı	ı	1	ı	l	i
					Everman	Evermannellidae	ae					
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
113.3 60.0		0.0		0.0		0.0				29.2		ı
					Paral	Paralepididae	ė					
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
3.3	1 1	1 .	4.5	0.0		0.0	0.0		0.0	 	 	
0.0 80.	i		5.1	0.0	ŀ		•	1		ı	I	ı
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00.0 70.	à	•	0.0	0.0	Į į		t I).).	4.0	1 1	l i	1 1
03.3 60.	1 4		0.0	4	0.0		1	0.0		i	ı	ı
03.3 70.	1		0.0	0.0	. 1		i	0.0	0.0	ı	ı	ı
106.7 40.0	1 1	0.0	000	0.0	1 1	0.0	1 1	0.0	7°T	1 1	1 1	l ŧ
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TABLE 4. (cont.)

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S ringe APR.			0.0								_		0 1																					0 6					4.7	
Lestidiops ringens	1 1	0.0	ı	1 1	ı	1	ı	ı	١	I	1	1 1	. !	ı		4.8			•	1 1		8.6		ı	1			0.0	ı	ı	ì	l ł	1	1	1	ı	ı	1	ŀ	
Le FEB.	10.5	•	0.0		•	•	ı	ı	ı	ı		0.0		1	1	1	1	1	1 9	0.0	•	1	ı		0.0	•		ı				4					10.2		ı	I
JAN.	1		0.0		9	• 1										0.0	0	0									0 0				o o	0	0	0 1			ı	ı	I	I
DEC.	0.0									i	1	i	ı	l i		0.0				9	9													0				- 0	0.0	
NOV.	; 	. 1	I	1	1 1	ı I	ı	ı		4.8		•	0.0			ı	ļ	1	ı	I	1		ı	ţ	1	i	1	ı	1	}	i	1	ı	1 1	ı	1	ı	1	ŀ	ı
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STATION	99	າ ເ	٠.	9			ה		، د	9	9	0	0		D u	9	ė	9	9	9	96			000.	00.	03.	03.	200	03.	.90	90	06.	10.	0,0			13.	13.	9	26.

TABLE 4. (cont.)

				Lestic	Lestidiops ringens	ingens	(cont.)	•				
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
133.3 60.0	1 	5.1		I	ŧ	0.0	1	ı	ı	I	ı	1
					Notolepis risso	is riss	20		 	 	 	1
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
7 90	1 1	0.0	0.0	0.0		0.0	5.2		0.0	1	i	ì
.0 80	0.0))))	0.0)) 	ı	5.2	0.0	1	0.0	ŀ	ı	ı
90.0 90.0	0.0	0 0	0.0	1 1	1 1	2°5	00.	1 1	0.0	t i	1 1	1 1
.7 80	1	0.0	0.0	0.0	ı	4.5)	0.0	0.0	1	ı	ł
					Aulopus	us spp.						
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
120.0 70.0		4.9		 		0.0		ı	١	0.0	1	ı
				Ω	Scopelosaurus		spp.					
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP	OCT.
.7 60		0.0	0.0	 	0.0	0.0	1	5.3	1 4	1	ı	1
0 80	I	0.0	10	0.0	ll	0.0	10	1 1	12.6	1 1	ı i	i I
0 7 0	1 (0.0	0.0	0 1	1	0.0	0,0	ı	12.2	ı	i	ı
3 90	1 1	0.0	0.0	1 4	1 1	0. 4 0. 4	0.0	1 0	0.0	l I	i I	1 1
106.7 70.0	1 1	40	0.0	. C. 4	1 1	000	1 1	0.0	0.0	0.0	1 1	t i
)			Scopel	Scopelarchidae	ae					
TAT	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
120.0 70.0		0.0		† † † †		4.3				6.6		ı
				Ber	Benthalbella dentata	lla den	tata					
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
70.0 90.0 86.7 90.0 96.7 60.0 103.3 50.0	0.0	0.0	0.0	0.0		10.2 5.0 0.0 0.0	0.0	0.0	0000	1 1 1 1	1 1 1 1	1 1 1

TABLE 4. (cont.)

1	OCT.	1	ł	ı	ı	1	ı	ı	ı	i		OCT.		ı	ı	ı	I	I	ı	1 1	1	1	1	! 	OCT.	 	ı	1	1	1	i	ı	ı	1 1	1	ı
	SEP.		1	1	1	ŀ	ı	1	Į	ı		SEP.		1	1	ı	ı	ŀ	ı	1 1	I	ı	ı		SEP.	111	i	1	1	١	ı	1	ı	t I	1	I
	AUG.		1	ı	ı	ļ	ı	ı	ı	ţ		AUG.	 	! !	ı	ı	1	ı	ı	1 1	0.0	0.0	ı	!	AUG.	111	1	1	i i	ı	+	1	ı	i I	ı	1
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olucris	MAY		0.0					ı	ı	ı	spp.	MAY	1	C C		4.7			ı	1 1	H	ì	ì		MAY	1 1 1	I	i	1 1	- 1	ı	1	4	11.3		
thys ve	APR.	1 1 1					5.2					APR.	1	9.0	•					0.0				Myctophidae	APR.	0.0	0.0							0.0		0.0
Rosenblattichthys volucris	MAR.		ı	ı	1	ı	ı	I	0.0	1	Scopelarchus	MAR.		l l	ı	1	ı	ı	0.0	ı	¥ 4		ĺ.	Mycto	MAR.	0.0	0.0	0.0	1 1) • •	ı	0.0	1 1	1	0.0
Rosenb	FEB.			0) •	0.0	t	0.0		0.0	S	FEB.			٠		ı	0.0		4.	•	ı	ı		FEB.	0.0			0.0			10.2		4°C		ı
	JAN.	1		•			0.0					JAN.			D	0.0	1			0.0	0	ı	ı		JAN.	0.0		0.0	t			ı	-	000		0.0
	DEC.	1	0	0		•	I	0	10.6	0		DEC.	1	0.0			i	ı		ν. ••		. 4			DEC.						0 0			0	•	0.0
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	TAT		6.7 80.	0.0	3 3 90.	6.7 60.		6.7 70.	03.3 60.	6.7 80.		STATION		0.0 80.	6.7 80.	0.0	0.0 100.	3.3 55.	0.0 60.	3.3 80	6.7 45.	6 7 60	6.7 50.		STATION	60.0 70.0	6.7 50.	6.7 55.	6.7 80.	6.7 yu.	0.0	0.0 90.	3.3 60.	3.3 80.	3.3 100.	6.7 55.

TABLE 4. (cont.)

76.77 66.0 76.77 66.0 76.77 66.0 76.77 66.0 76.77 76.0 76.77 76.0 76.77 76.0 76.77 76.0 76.77 76.0 88.10 10.0 88.10	776.7 776.7 776.7 776.7 80.0 880.0 880.0 880.0 880.0 880.0 883.3 883.3 883.3 883.3 883.3 883.3 883.3		! ! ! !	1					!					1
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88.3 \$51.0		00000000	4				ı	1 0		i !		1	ı	1
88.3 85.0		0000000	(0	I			1		ı	í	1
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88.5.1 90.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	6.7	00000	4			1	- 1		ر د .	ı	0	i	ı	ì
886.7 50.0	2 / 2	0000					ı	•		ı	0	ı	ı	ł
86.7 50.0		0000					1		7	1		1	ı	ı
86.7 80.0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 / 0	000				•	ı			ı		1	ı	1
86.7 100.0	0 / 0	0				•	ŀ		0	ı		1	t	1
86.7 100.0 99.0 53.0 99.0 53.0 99.0 63.0 99.0 99.0 99.0 99.0 99.0 99.0 99.0 99.0	7.0	0		ı	•	ı	ı		6	ι	0	ı	1	1
90.0	7.0			1		1	1	,		ı		ı	ı	ļ
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90.0 80.0 0.0 - 0.0 - 0.0 0.0 0.0 0.0 0.0 0.0		0		1			ı	0		1		ı	ı	ı
96.7 35.0 90.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	0.0	0		ı		1	ł	0		ı		l	ı	ł
99.3 90.0	0.0	0 0.				ſ	I	0		ı	0	ł	I	ŀ
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96.7 40.0 96.7 40.0 96.7 45.0 96.7 45.0 96.7 55.0 96.7 55.0 96.7 55.0 96.7 60.0 96.7 60.0 96.8 6.0 96.9 6.0 96.	6.7 3	0.				ı			t i			1	ı	ŧ
96.7 45.0 96.7 55.0 96.7 55.0 96.7 56.0 96.7 60.0 96.7 60.0 96.8 6.0 96.9 6.0 96.0	6.7	0.		4		1 1		T C	1		• •	ı	ı	1
96.7 55.0	0.7	0.0			0	ı	•		١			ı	ı	1
96.7 60.0	7.00					1			1			ı	ı	i
96.7 70.0 96.7 70.0 96.7 80.0 96.7 80.0 96.7 80.0 96.7 80.0 96.7 80.0 96.7 80.0 96.7 80.0 96.7 80.0 96.7 80.0 96.7 80.0 96.8 7 7 8 9 9 9 8 7 7 8 8 9 8 7 8 8 9 8 9	7.9					ı		7	ı		0	1	ı	I
$96.7 \ 80.0$ $ 0.0$ 0.0 0.0 $ 4.5$ $ 5.1$ 8.9 $ 0.0$ 0.0	7.79						1		ı		ô	ı	ı	i
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100.0 3.7 (a) 1.0 (b) 1.0 (c)	STATION		NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
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TABLE 4. (cont.)

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TABLE 4. (cont.)

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NOV.			1	ł	1	1	ı	ı	1	I	ı	I	ı	ŀ	ı	1	ı	I	ı	i	i	1 1	I	1	ļ	ı	ı	1	I	1	1 1	. 1	ı	1	ı	ı	ı	ţ	1	ı	ı	1	ı
z	40.0	n c	· -		0	0	-	2	5	0	5.	0	0	0.	0	0.	2.	5.	0	ů,	O	00		2 5		5	0	0.	0	0		· -	٠ .		0.	0	0	6	5.	0.	0.	0.	0
STATION	103.3	903	000	30	03.	03.	90	06.	06.	06.	90	06.	90	.90	90	06.	10.	10.	10.	10.	10,	10.	90	3.5	3	13.	13.	13.	13.	13.	97	9	9	9	16.	16.	16.	18.	20.	20.	20.	20.	20.

TABLE 4. (cont.)

				riphot	urus me	Triphoturus mexicanus	cont.	(•] 	 	 	
TAT	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
23.3 36.	1					0.0	-	ı	1		1	I
3,3 37	I	0.0	ı	ı	0.0	12.8	ı	ı	1	0.0	ı	1
23.3 42.	1	0	1	1		137.3	ı	I	1		ı	ı
23.3 45.	ı	0	i	ı		56.6	I	l	1	I	ı	ı
23.3 50.	ı	0	ı	1	10.1	98°6	ł	1	ı	ı	ı	ı
23.3 60.	ı		1	1	19.1	55.1	ı	ı	ı	I	ì	ı
26.7 35.	ŧ	0	ì	í	1		1	I	ŀ	ı	ı	ı
26.7 40.	ı		1	ı	1	204.7	ı	ı	1	ı	ı	ı
26.7 45.	+	0	1	1	1	69	ı	1	ı	1	ı	I
26.7 50.	ı		ı	ı	ł	93.8	ı	ı	1	ŀ	ı	l
26.7 60.	ı		1	ı	18.8	0	1	ı	ł	t	ı	I
30.0 28.	ł		ł	I			ı	i	1	ı	t	1
30.0 30.	ı		ŀ	ı	0.0	6	ı	I	i	ı	ı	ı
30.0 35.	I	- 4	ì	1		20.8	1	ı	į	ł	1	ı
30.0 50.	ı		i	ı	ı	5.2	ı	1	ı	i	1	ı
30.0 60.	ı		1	1	ı	9.3	ł	1	I	ì	ı	Į
33.3 60.	ı		l	ı	ı	29.1	I	1	ł	I	ı	1
36.7 60.	ı		I	1	1	ı	1	1	l	ı	ı	1
				a	Diogenichthys		spp.					
	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	ЭПГУ	AUG.	SEP.	OCT.
3 3 RO		0.0	0.0			5.4				 	1	ı
3 3 60	0 0		0.0	0.0	ı	10.4	0.0	1		ı	ı	ı
00.0			0.0	0.0	1	0.0	•	31.0	0.0	ı	ı	ı
03.3 45.	ı		0.0	0.0	ı		ı	48.4		ı	ı	ı
03.3 50.	1		5.2	ı	0.0		1	16.4		ı	1	1
03.3 60.	ı		0.0	I	0.0		1	10.9		ı	I	I
03.3 90.	ı		ı		ı	L	ı	5.4		I	ı	ı
06.7 45.	ı		0.0		ł		i	14.6	0.0	ı	ł	1
06.7 60.	ı		0.0	•	ł	0.0	ı			1	ı	l
06.7 80.	ŧ		0.0		I		i	0.0		1 0	1 1	ıl
10.0 60.	ı		0.0	0	1		l	•	I			
13.3 40.	1 1	4	l I		1 1		ł I	1 1	l I		t I	l
13.3 45.	+ 1		ı	•	1		ı	ı	ı		i	1
16.7 80.	ŀ		ı	•	1		i	1	ı		!	ı
120.0 70.0	ı	0.0	ı	ı	ı	0.0	ŀ	1	ı	6.6	ı	ı
20.0 80.	ı		i	ı	1		l	I	I		ı	1
6.7 45.	l		ı	ı	1 9	0.0	1	ŀ	1	1 1	1 1	1 1
6.7 60.	l		ł	1	0.0	0.0	1	I				

OCT.	1	I	1	1 1	1 1	ı		1 1		1	١	١	1	1	ı	1	•	1 1	1	1	i	1	ı	ı	1 1	1	1	ı	I	i I	I	1	1	ı	I	l	1 1	ı t	i	I	
SEP.	ı	I	1	i	1 1	1	ı	1 1	1	1	١	1	ı	ı	l	ı	i	1 1	1	1	ı	١	1	ı	1	ı	1	I	1	1 1	1	ł	i	ı	1	ŀ	1 -		- 1		
AUG.	í	ı	ı	1	i I	1		1 1	1	1 1	ı	ı	ı	ı	ı	ı	ĺ	1 1	1	ı	ı	ı	ı	I	1 1	ì	ı	ı	ŀ	ł I	ı	ı	ı	ı	1	I	1	۱ ۱	ı		
JULY	ı	1 4		•	000			•			• •	10.5	ı					~ c				0.0			•	4 I											0.0		•		
JUNE	0.0	•	ŀ	ł	1 1	1	l	1 1	I	1 1	ı	ı	1	ı	1	ı	ı	1 1	- 1	1	ı	1	ı	ı	1 1	1	ı	1			0 1						0.0	•			
MAY	í	1 4	9.4		•	•			٠	٠	، کا ل		0					000						•	•	•			ı	1	I (ì	1	ı	l	1	I	1 :	1 1		
APR.	0.0			0	7.0	0			•	7.0	•	0.0				5.		0.0			1		5.2									• •					0.0	0	•		
MAR.	0.0		0.0	ţ	ı	1		0.0	(د ا د		1	ı	ı	ı	ı	i	1 1	l :	ı I	ı	ı	1	ı	1 1	1	ł	1	0.0	l	i I	0.0	0.0		1	1	1		7.0		
FEB.		0.0	1 9	•	4. c	0.0	ì	1 6	0.0	0.0	_	0.0		0.0	I	1		0.0	•	l I	ì	0.0	I		0.0	1	ŀ	i			4.0		ı	0.0			5.1	•	1 1		
JAN.	9.8	1	0.0	1 6	0.0	0.0	1 0		0.0		•	16.0						0.0		10.7	•	0.0	0.0	1 (0.0	•	0.0						• •				0.0				
DEC.					0.0	•			O			2.2				5.0		1	I	1 1	1	I	1	ı	I		0.0					•	• •				$\tilde{0}$				
NOV.		1	í	ı	I	ı	1	ı	1	ı	l i	ı	1	ı	ı	!		0				0.0			0.0		ı	ļ	ı	ı	1 1	ı	1	1	ł	ı	1	1	1 -	ı	
N.	50.	0	0	0.	0	90.	5	0	0	0				55.	0.	0	0	55.0	· .		. 0	60.	90.	0	0		. 0	0	55.	0.				0	0	0.	5				
STATION	66.7	9	0.	0.	ش	٠,	٠,	٥	ê.	٠ و				m	3	3.	3	86.7	٥	ه د	9		0	0	د	n		3	9	9	ه م	.00	000	000	00.	00.	8	03.	002	0.2	

TABLE 4. (cont.)

	OCT.	11111111		OCT.	}	ł	I	ı	8 1	I	1 1	ı	í	1	I	ı	ž 6	ı	1	ı	ı	1	l I	1	!	1	ı	ı	1	1	1	1 1	
	SEP.	1 1 1 1 1 1 1 1		SEP.	ı	1	I	ı	ì	I	1 1	١	ı	1	ı	ı	1 1	1	ı	I	ı	1	1 1	ı	1	ı	1	1	t	quan	î	ł 1	
	AUG.	0000		AUG.		ı	1	ı	ł	I	1 1	1	1	ı	I	1	1 1	1	1	ı	1 (، ،		8			0		о 20 и	15.4	٥
	JULY	0000111111		JULY	0.0				0		υ <		. 0		ŝ		,		8			ł	ł 1	ı	ı	ı	ı	1	1	ı	ı	1 1	
nt.)	JUNE	000000000000000000000000000000000000000		JUNE		ı	1				•	•						n c	0.0				•	•	1	ı	ı	1	ı	1	1	1 1	
us (cont.	MAY		laternatus	MAY	•	71.6		ı	ŧ	ì	1 1	l t	1	1	ı	i	t	1 1	1	1	1	ì	1 1	ı	١	1	I	1	1	1	ł		
lantic	APR.	000 00000		APR.	5.4			0									0							0	0 0							0.0	
Diogenichthys atlanticus	MAR.	0.0	Diogenichthys	MAR.		1	ŀ	ı			0.0		•	ŀ	í	ı	1	J I	ı	ł	ı	ı	1 1	i	ı	ı	ı	ŀ					ļ
ogenich	FEB.	20.8 23.5 0.0 0.0 0.0 9.8	Dioge	FEB.		0.0			0.0	1	1 0	0.0	0.0					0	10.0			6			0 0					1	t	1 1	I
Dia	JAN.	0.0 0.0 0.0 0.0 0.0		JAN.	1						0.								ۍ د د د			0		0	1	Į	I	I	I	ı	1	1	I
	DEC.	0.00		DEC.	0 0		1				0	0					4.		0 1							0	0	4	_			0.0	
	NOV.			NOV.					ı	1	ļ	† I	[]	1	ı	ı	!	i i	1 1	ı	l	1	I	t i	1	1	1	1	1	1	1	1	i
	7	60.0 80.0 70.0 70.0 80.0 35.0 60.0		7	0			0	0.	5	0				0	5.	0.0	00			0	0	0 0				0	0	0	0	5	50.0	· O
	STATION	106.7 106.7 106.7 106.7 110.0 1113.3		STATION				9	96	00	00.	00	200	03.	90	90	90	90	90	10.	10.	10.	10.	10.			13.	13.	13.	16.	16.	116.7	10.

TABLE 4. (cont.)

TATION												
16.7 70	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
	0			ı	ı		ı	ł	ļ	0.0	1	ŧ
20.0 45			ı	ſ	ı	-	1	1	ı	70.2	I	ı
120.0 50.	0	٥,	ı	l	1	7.0	1 1	1 1	1 1	7.67	1 1	1 1
20.0 60		, c	1 1	I I	1 1		i 1	. !	1		ı	i
20.0 /0		0	1	1 1		0.0	à	1	1	0.0	ı	ı
73 3 37		. 4	1	ı	0.0		1	ı	ı	0.0	ı	ı
73.3 47		5.	ı	ı	0.0		ı	i	ı	14.6	1	ı
23 3 45		5	1	ı		0	i	١	1	ı	ı	ı
23.2 5.02		0	ı	1	35.4		1	1	1	1	1	1
23.3 60		0	ı	ı	3	59.7	1	į	ı	ı	ı	ł
26.7 35		0	1	ı	1	35.4	ı	l	ı	1	ı	ı
26.7 40			ı	ı	1	68.2	ı	ı	1	ı	ı	ì
26.7 45		0.	ı	ŀ	ı	201.0	ı	ı	1	ł	ı	ŀ
26.7 50		5.	ı	i		0	ı	ı	1	1	ì	i
26.7 60			ı	ı	0.0	49.2	ı	i	i	ł	i	ŀ
30.0 35		0	ı	ı	0		ı	I	ı	ı	ı	ı
30.0 40		0	ı	ı	ı	164.3	ı	ı	ı	ŧ	I	ŧ
30.0 50			i	ı	ı	95.9	ı	ı	ı	I	i	t
30.0 60		5.	ı	1	ı	œ	ł	i	i	ı	ı	ł
33.3 30		0	ı	ı	ı	9.8	ı	ı	ı	I	I	i
33,3 35		0	ı	i	1	19.7	ı	ı	ı	ı	ı	ŀ
33.3 40			ı	ı	i		1	ı	1	l	ı	ŧ
33,3 50		4	1	1	ı	3	ł	ı	ı	I	ı	i
33.3 60			I	1	ŀ	106.8	ı	l	1	ı	ŀ	ı
36.7 40	- 0	6	ı	t	i	l	ı	ı	í	1	l	ł
36.7 50		ń	ı	ŧ	1	1	ì	ı	1	ı	I	Į
36.7 60		9.	1	ı	l	ı	i	1	1	I	ı	ı
				¥.	Electrona	na rissoi	oi					
						- 1						
	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
0 0 70	1	i ¬	5.1			0.0		ı		1	1	l
0.0 90.)	5.6	1	1	0.0				ı	ı	1
96.7 90.				0.0	1 (1			ı	ł	ı
100.0 40.	- 0	0.0	0.0	1 9	0.0	0.0	1 1	0.0	y	1 1	1 1	1 1
.06./.00		•	•	0.0					0			
				Con	Gonichthys	tenuiculus	snlns					
	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
		0.0	0.00		0.0	4.9	1 1	0.0	0.0	1 1	1 1	1 1
10.0 80.			0.0	0.0	į	2.0	1	0.0	•	0.0	ı	1

TABLE 4. (cont.)

				Sonicht	Gonichthys tenuiculus	uiculus	s (cont.)	(•	 	 	1	
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
.7 50.					0.0	0.0	1	1	1 (0.0	1 1	i I
20.0 60.	ı		I	l	1). V	ı i	1	i 1	0.0	ł	ı
20.0 /0.	ı l		1 1	1	4.8		t	ı	ł))	ı	1
26.7 50.	1		ı	ı	i	0.0	1	ı	ł	1	ı	ı
30.0 40.	i		i	ı	ı		ı	ı	1	ı	ı	ı
30.0 50.	-		ı	ı	į	10.3	Į.	1 1		}	1 1	1 1
130.0 60.0	l í	0.0	1 1	1 1	1 1	9.7	1 1	1 1	1	ı	1	ı
					Hygop	Hygophum spp						
STATION	NON	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
1 0						10 0	0 0		0.0	-		1
6.7 90.	0.1	0.0	0.0	0.0	1	4.3) 	0.0	0.0	ł	1	ı
06.7 40.	ı	0.0	0.0	0.0	ı	4.9	ı	0.0	0.0	I	i	1
06.7 60.	1	0.0	0.0	0.0	ŀ	4.0 0.0	ŧ	0.0	0.0	1	ŧ I	l I
13.3 70.	1	0.0	1 1	0.0	1 1	0.0	!	1 1	li	4.0	ŀ	i i
116.7 80.0	1 1	0.0	1	ı	í	0.0	1	ı	ı	9.6	1	i
				7	Нудорћит	n atratum	um				; ; ; ;	! ! ! ! !
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
0 35.		0.0	0.0		0.0	0.0	 	0.0	10.5	1	ŀ	ı
00.00	1	0.0	0.0	0.0) 	0.0	1	0.0	8.7	1	1	1
00.00	ı	0.0	0.0		1	0.0	ŧ	0.0	0.0	1	1	1 6
06.7 60.	1	0.0	0.0		ł		1 1			1	1	1
06.7 70.	1 1		0.0	2.6	I I		1 1	0.1	0.1	0.0	1	ı
20.0 45.	1	0.0	ı		i	0.0	t	ı	1	17.5	i	ı
20.0 80.	ı	0.0	ŧ	ı	1 9	0.0	1	ı	ı	4.7	ı	1
126.7 60.0	1	0.0	1 (1 1	၁ · ႐	ص د ص	1 1	1 1	ıl	1 1	1 1	1 1
30.0	ı	0.0				,						
				Hy	Нудорћит	reinhardtii	dtii	 		1 1	1	
	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
03.3 70.			0.0	4.5	ı		1	0.0	0.0	1 0	ı	ı
110.0 70.0	1 1	0.0	0.0	0.0	1 1	4 O	1 1	0.0	1	0.0	1 1	l i
36.7 50.	i		I	ı	ı	•	ı	ı	1))) }	i	I

TABLE 4. (cont.)

						Lowein	Loweina rara						
STATION		NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
96.7 103.3 106.7	60.0 35.0 60.0		0.00	0.00	0.0	0.0	0.0	1 1 1	5.4	10.5	1 1 1	1 1 1	1 1 1
					My	Myctophum nitidulum	nitidu	ון מש	ļ				1
STATION		NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
	0:				3.6			1	0.0	1 6	1	ı	ì
80.0	90.0	ł	0.0	0.0		1 1	0 0	0.0	1 1	0.0	1 1	1 1	1 1
83		1 1		5.2		ı		8	0.0	0.0	ı	1	ı
		1		0.0	4.5	ı		ţ	0.0	0.0	1 1	1 1	1 1
06.	0	1		0.0		l I	0.4	ŧ I	0.0	0.1	0.0	1	1
13.		1 1		•	0.0	ı		1	1	ı		ı	1
13.	0	ı	•	ı	•	1		ı	1	1		ı	1 1
16.	0.	ı	6	I	1	1 1		1 1	l i	1 1	0.0	1 1	ı i
20.		1 1		1 1	I I) <u>i</u>		l	ı	ı		1	1
23.		ţ		i	1	0.0		1	1	ı		1	1
30.	0	í		í	1	1		ı	1	ł	1	1	1 1
33.	0	1		1	ı	ı		ı	ı	ł	1	ŀ	I
					Prot	Protomyctophum crockeri	hum cro	ckeri					
STATION		NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
16	2.				1	0.0	0.0	ì	4.4	1	ı	1	ŧ
	5.	ı	1		1		10.3	I		1 1	1 1	1 1	1 1
· ·	0	1 -	1 1	0.0		1 1		t I	0.0	1 1		ı	i
		. 1	١	1	21.7	ı		ı		í	i	ı	ı
	5.	1	0.	18.7	ι	0.0	10.6	I	0.0	1 1	1 1	1 1	1 1
د	0 4	1 1		ا ۵	1 1			l I	•	ı	1	1	ı
	. 0	1	. 6	ı	8.3	i	0.0	1		i	1	1	ł
3	0.	ı	8	1	0.6	ı	ı	ı		ı	ı	i	į (
ص	0	ı	٠. د	1 6	10.4			1 1		1 1	1 1	1 1	1 1
9	, O	1 1		39.3	. 1	0.0	11.3	ı		ı	1	ı	ı
9	5.	1	5.			ı		F		1	1	1 (1 1
ں ف	00	ı I		1 1	10.9	1 1	10.3	i I	10.4	1 1	1	1 1	1
66.7	0.06	ı	24.1	l	3.6	1	1	ı		1 9	t	1	i
0.	3	I	0.	10.4	1	0.0	0.0	ı	ı	0.0	t	ı	ı

70.0 60.0	FEB. MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
0.0 65.0		0.0	9.4	ı	0.0	ı	1	ı
0.0 70.0				1	1 9	ı	ı	1
0.0 80.0	0.7	0.0		ı	19.7	ì	I	1
0.0 90.0 - 0.0	•	5.6	ı	I		1	ı	ı
3.3 53.0	0.			ı		I	i	I
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TABLE 4. (cont.)

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TABLE 4. (cont.)

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		l			0.0		11.2	0.0	ı	0.0	ı	ı	ł
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TABLE 4. (cont.)

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TABLE 4. (cont.)

				Merluco	zius pre	Merluccius productus	(cont.	•		 		1
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
20.0 45.		1 .			 	4.2		1	1	0.0	1	1
23.3 37.	ł		ı	1	0.0	4.3	ı	ı	i		ı	1
26.7 33.	ı		ı	1	t	33.5	ł	ı	I	ł	ı	ı
26.7 35.	I		ı	1	1	1.7		ı	i	I I	1 1	ł I
30.0 50.	1		Li	l f	1 1	7.0	1 1	l i	H	ł ł	1	1
33.3 23.		9	ı	ı	l	40.8	ŀ	1	1	ł	ı	1
133.3 30.0	1	0.0	ł	i	1	127.9	ı	ı	ı	i	ı	1
					Physiculus	dds sn[n	.p.					
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
130.0 35.0		0.0			0.0	5.2	ı	ı	1	ı	i	I
					Macr	Macrouridae						
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
0.0 90.	; ! ! ! ! ! ! !	1		8.1	 	0.0)	1	ı	1
96.7 80	ì I	000	0°.7	0.0	- 0	00	1 1	0.0	000	1 1	l k	1 1
6.7 40.	1		7. 1	ı	0.0	0.0	ı	•	•	5.0	ı	1
					Ophid	Ophidiiformes	S			 		! ! !
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
55.			0.0		0.0	0.0		11.1	1			ı
0.0 53.	ì		0.0	1	0.0	0.0	1	1	10.6	ı	ı	ı
3.3 53.	*		0.0	I		0.0	10.1	ı	0.0	1	1	1 1
6.7 51.	I		0.0	I	0.0		0.0	1 1	20.01	1 1	1 1	1 1
6.7 55.	1 1			I I	0.0			1		ł	1	ŀ
2.0 46.	ı		0.0	0.0)	0.0	10.9	t	0.0	1	ŀ	ı
0.0 30.			0.0	0.0	1			1		1 1	1 1	1 1
3.3 26.		1 1	0.0	0.0	l !			1 1	• (1 1	+ 1	1
3.3 35.	0.0	1	0.0	0.0	ı	6.6		1		ι	ı	1
96.7 100.	1		1 4	1 (I	1 4	ı	5.1	1 0	ŀ	ı	i
03.3 29.	1 [0 0	0.0	1 [0.0	1 1	0.0	10.6	1 1	1 1	1 1
10.0 45.	ļ		0.0	0.0	1	0.0	1	5.0	0.0	1 1	ı	ı
116.7 50.0	1 1	0.0	1 1	1 1	0.0	0.0	1 1	1 }	i 1	10.3	1 1	1 1
20.0 45.	ì		ι	ł	•	0.0	ı	ŀ	F	8 8	I	ı

TABLE 4. (cont.)

				0pl	Ophidiiformes		(cont.)					
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
123.3 42.0		0.0			0.0	0.0	 - - - - - - - -	 		4.9		
				Bros	Brosmophycis marginata	is marg	rinata					
TA	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
		0.0	0.0	 	0.0	0.0		0 r.				
66.7 70.0 90.0 30.0	0.0	0.0	0.0	0.0) - -	0.0	0.0		10.6	i 1	1 1	1 1
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ATION	NOV.	DEC.	JAN.	FEB.		APR.	MAY	JUNE	700x	AUG.	SEP.	oci.
93.3 26./	0.0	I	0.0	0.0	ı	0.0	0.0	ţ	1.6	1	I	ı
	 			1 1	Cera	Ceratioidei		 		 		
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
100.0 90.0	1	4.9	0.0	0.0	1	0.0	t	0.0	0.0	1	ı	
					Exoc	Exocoetidae	6 1					
	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
66.7 49.0		0.0	0.0	 	19.3	0.0		0.0	10	 	1 1	
0	t	0.0	0.0	1	10.5	0.0)))	0.0	0.0	i	ı	ı
					Hemira	Hemiramphidae	je Je					
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
120.0 60.0	ı	0.0	1	1	ı	4.7				0.0		
					Cololabis	is saira	ra					
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
66.7 49.0 76.7 70.0 76.7 80.0 76.7 90.0	1 1 1 1	9.7 9.2 0.0 11.8	0.00	0.0	0 • 0 1 1 1	0000	0.00	0.0	0.000.0	1111	1111	1 1 1 1

TABLE 4. (cont.)

				Colo	Cololabis saira		(cont.)					
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
6.7 90	0.0		0.0		1 1	0.0	0.0	1 1	11.0	1 [1 1	1 1
0.0 60.	0.0		0.0	0.0	ı	5.4	0.0	1 1	0.0	J	ı	i
10.0 60.	9 (6)	0.0	0.0	0.0	1 0	5.0	1 1	0.0	1 1	0.0	1 !	1 1
80.	I I		1 1	1	0 1	4.9	1	t	ı	0.0	t	!
					Athe	Atherinidae						
1 =	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	ocr.
96.7 29.			0.0		0.0	4.6	ı	7.9	0.0	1 6	i	1
116.7 25.0 $120.0 24.0$	1 1	0.4	l l	1 (0.0	0.0 0.0	1 1	1 1	: 1	0.0	÷ 1	
					Trachi	Trachipteridae	ае					
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	ocT.
3.3 60.			0.0		0.0	0.0	0.0	1 1 1 1 1 1 1	11.0		1	
6.7 65.	ı		1 4	1 0	ı	1 0	10.8	ı	י ויי	1 1	1	1 1
93 3 80.0	t 1	0.0	T 0	0.0	1 1	0.0	0.0	1 1	0.0	1	Ιı	1
6.7 45.	į		0.0	1	0.0	0.0	ı	0.0	5.0	ı	I	1
					Melamphaes	haes spp	Ď.					1
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	ocT.
0.0 80.		1		0.0	1	0.0	1	8.3	ı	1	ı	1
3.3 60.	ı		25.1	1 0	0.0	0.0	1 1	0.0	1 1	ł I	1 1	i I
6.7 70.	l I			10.9	1	10.3	ı	0.0	ι	ı	ı	ı
0.0 60.	1 1		0.0	101	0.0	11.3	0.0	i l	0.0	3 1	1 1	1 1
0.0 80.	I		ı	4.6	1	0.0)))	ı	12.6	ŀ	ι	1
0.0 90.	1 1		10	10.2	1 0 1	0.0	1 0	1 1	0.0	1 1	i I	1 1
3.3 70.	1		0.0	0.0	1 :	0.0))) (1	10.8	ı	ı	1
3.3 90. 6.7 51.	1 1		000	0.0	0.0	0.0	0.0	ı ı	10.5	1 1	1 1	1 1
6.7 60.	1		0.0	1 6	0.0	0.0	0.0	I I	0.0	1 1	1 (i I
6.7 80.6	i 1		φ. 0.0	30.1	i l	0.0	0.0	1 1	20.2	l i	ll	ł (
80.0 70.0 80.0 80.0	1 4	0.0	5.1	4.4	i 1	10.2	$0.0 \\ 21.1$	1 1	0.0 5.1	1 [i I	lι

					Mela	Melamphaes	spp. ((cont.)					
STATION	1	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
1 1	1.			! ! ! ! !					ı	ı	ı	ļ	ı
1 0.0		1 1			20.3	1		0.0	ı	0.0	ı	ı	1
200	: -	1			,)	1	10.2		ŧ	0.0	ı	1	ı
	٠.	1	0.0	0.0	ı	ı			1		ł	1	ł
	: _	ì	•		ı	ł			1		ŀ	I	ı
7	: _		ı		0.0	ł			ι	0.0	1	t	ı
1.0	: -		ı		1	1			ı		ł	ì	I
7.0	•	•	1		í	1	0		ı		1	ı	1
7.	: .		ı		ı	i			1		ı	ł	i
\ 0 0	: -		- 1			ı	11.1	0.0	ı	0.0	l	ı	I
0.0	٠.		ı		0.0	ı	0		1		ı	ı	ι
	:.		ı			1	10.3		ı		ı	1	ł
0.0	•	, 0	1		ı	ı	5		1		I	1	ŧ
0.0	٠,	0	١	- 1	ł	1	1		1	ŧ	ı	1	1
T 0.0	: -		ı		_	1		0.	1		1	ł	i
ກຸດ	:.		ı		0.0	ı			ı		1	ı	i
ກ. ຕຸ	٠.					1		0	ı		1	ı	ł
ى. د د	٠.				i	١	6		1		ı	1	1
ى. د د	٠.	l I		•	ı				0.0		1	I	1
7.0	٠.	1 1		0	1	5,2		ı			ı	ı	ı
7.0	٠.				1			ı	0.		ı	ı	ı
7.0	٠.	ł I		0 .	-			ı			I	ı	ı
/ 0	٠.	l H	٠	•	• 1	1		ı			I	I	ı
7 - 0	:-	1			0.0	1		ι			1	I	ļ
000	:_	ı				0.0	4.	i			I	ı	ı
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0.00		ł				i		ı	•		1	ł I	
0.00	Ċ	ı				1		I			l I	1	1
03.3	ċ	ı		0.0		i		1 1	, ,		ı	ł	1
03.3	ů.	ı				1 1		1			l	ı	ı
03.3	· .	1				1		ı			1	1	ı
03.3		1 1	0		•	ł	8	ı			ı	ı	ı
7.90		ı			4 (1		1			ı	I	1
100.		•				ı		i				ı	ı
13.3		ŀ			0.0	ı		l	1	ı		l	1 (
13.3		I		ł		1		ı	ı	ŀ		1	1 1
13.3		1		i		ı		ł	ı	1 1		l	1 1
16.7	0	I		ı	i	ı		i	1 1	1	•	ı	!
20.02	ċ	1		I	ı			l I	1 1	- 1	•	I	ı
123.3	50.0	ı	0.0	I	1	•	0.0	1	ı	ł	ı	ı	1
23.3	- -	1		1 !	1 1	4		ı	1	ŀ	ı	ı	ı
1.97	Š	1 1		1	ı	ı		ı	í	1	i	ı	1
7.97	_	I	•										

TABLE 4. (cont.)

		 	1		Poromi	Poromitra spp.	Ď.	1				
ATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
00		1		0.0		0,0	ı	1	10.3	t	1	ě
3 60	t	a ·	0.0	•	0.0	0.0	0.0	ı	11.0	1	ı	ł
3 70.	ŀ		0.0	0.0	1	0.0	1	1	10.8	ı	ł	ı
7 90.	ı		0.0	0.0	ı	0.0	0.0	i	10.1	ı	ı	1
3 80.0	1	0.0	0.0	i	ı	4.0	0.0	1 :	1.0	} (1 1	1 1
3 90.		0	0.0	l i	1 1	0.0		1 1		1 1	l I	1
7 80.		i I	7.0	ì	ı	0.0		1		ı	ı	ı
2 60.				0	ı		0.0	ı		1	i	ı
2 000				4.3	ı	0.0		0.0	0.0	1	ı	ł
35.	1		0.0	1	0.0	0.0	ı	5.2		1	ı	1
70.5	1		0.0	i	0.0	4.6	ı	0.0		ļ	4	ı
000	ı		0.0	0.0	1	8.6	ı	0.0		ł	ı	ı
3 60	ı		0.0	,	0.0	4.9	1			ı	ı	1
70.	ı		0.0	4.5))) 	10.4	1			ì	ı	ł
7 60.	ŀ		0.0	0.0	1	4.9	1			ı	ı	į
70.	ı	•		6,00	ı	0.0	ı	0.0		i	ı	ı
3 25.	ı))))	8	1	0.0	ı		ı	0.0	ı	i
הרב	ł	• •	1) - -	0.0	4.3	ı	ł	ı	0.0	ı	ł
50.	ı	4.8	ı	ı		0.0	ı	1	ı	I	ı	ı
				Scop	Scopelogadus		bispinosus					
TATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
		1						1		 		
3000	1 1			0.0	ł ł	7.0		ı	0.0	1	1	ı
300			0.0	0.6	1	0.0		0.0	0.0	ł	ı	ŧ
0.08 0.	I	0.0	0.0	0.0	ı	5.0	1	0.0	1	0.0	ı	ı
				Macr	Macroramphosus gracilis	sus gr	acilis					
TATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	חחר	AUG.	SEP.	OCT.
50.		1 .	5.2		0.0	0.0		0.0	0.0		1 	
3 70.	1		0.0	0.0	i	5.2	ı			ł	ì	ł
7 60.	ı		0.0	0.0	1		ŀ	7.0	0.0	l	1	1 1
7 70.	1		0.0	0.0	10		4				l I	l 1
.7 60.0	1 1	4.7	ſ l	1 1	0.1	0.0	1 1	1	ı	0.0	ı	ı
					Syngna	Syngnathus spp	Д					
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
20					4.6	 	 		 		ı	i
30.) •							

TABLE 4. (cont.)

				Syng	Syngnathus	spp. ((cont.)					
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
120.0 30.0 120.0 35.0 123.3 36.0	 	0.0	1 1 1	1 1 1	0.0	7.7 8.1 0.0	1 8 1	1 1 1	1 1 1	0.0	1 1 1	1 1 1
					Ago	Agonidae						
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
3.3 52.			0.0	1 1	0.0	0.0	1 1	4.9	i I	1 1	1 1	1-1
0.0 51.	1		0.0	1 6	8.3	0.0	0.0	1 1		1 1	1 1	1 1
3.3 51. 6.7 40.			0.0	5.3	1 1	0.0	0.0	1		1	1	1
6.7 50.	0.0	1 1	0.0	0.0	1 1	0.0	0.0	1 1		1 1	l t	Ιİ
103.3 30.0 106.7 70.0	0 1 1	4.5	000	0.0	1 1	000		0.0	0.0	i i	i i	1 1
					Cot	Cottidae						
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
0 0 50			0.0			0.0	i	2.0	ı	ı	ı	1
3.3 52.	ı		0.0	1	0.0	0.0	1	0.0	ſ	ł	i	ı
3.3 55.	ı	0.	0.0	i	0.0	0.0	I	4.7	ı	i	1 -	i
6.7 60.	1 1		0.0	1 1	10.1	0 6	0.0	0.0	18.4	l I	1 1	Ιι
6.7 48.	1	0.0	0.0	ı	0.0	0.0	14.4	1	0.0	ı	ı	1
3.3 51.			0.0	92.3	1	10.0	0.0	ı	34.5	ı	ı	1
6.7 33.	0.0	1 1	0.0	0.0	1 1	000	419.2	1 1	17.0	1 1	1 1	1 1
00.0 29.			0.0)))	5.5	0.0	1	5.1	0.0	I	ı	ļ
00.0 30.	ı		0.0	1 0	0.0	~ €	f	0.0	0.0	1	1 1	1 1
03.3 29.	1 1		0.0	0.0	1 1	ာ င	1 1	0.4	0.0	1 1	1	1
06.7 32.	I		0.0	0.0	ı	5.1	ı	0.0	0.0	t	ı	i
10.0 32.	ı		0.0	ł	ı	10.4	1	0.0	0.0		ı	ı
13.3 29.	i		1	ŀ	0.0	3,5	ı	1	1		1	1
120.0 25.0 120.0 45.0	1 (0.0	l i	1 1	0.0	0.0	i t	1 1	1 1		1 1	l i
				Scorpa	enicht	lys mar	Scorpaenichthys marmoratus					
1 🖽	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
73.3 50.0		8.5	0.0	i ! ! ! ! ! !	0.0	0.0	0.0	1	0.0	1	1	1

TABLE 4. (cont.)

			Sco	rpaenic	chthys n	narmora	Scorpaenichthys marmoratus (cont.	ont.)				
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
76.7 51.0 80.0 55.0	! ! ! ! ! ! ! !	10.8	0.0	 	0.0	0.0	0.0	ł t	0.0	1 (1 1	1 1
					Cyclo	Cyclopteridae	e					
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
250	! 		0.0	1 1 1	0.0	0.00	1 1	7.4.0 2.0.0	i I (1 1 1	1 1 1	ł I I
60.0 80.0 63.3 50.0 70.0 51.0 73.3 50.0	1 1 1 1 1	0000	0000	7.2	0000	00000	0.00	0.00	0.00	1111		1111
					Hexagi	Hexagrammidae	a					
1 =	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
73.3 50.0		4.2	0.0] 	0.0	0.0	0.0		0.0	ı	ì	1
				to	Ophiodon elongatus	elongā	tus					
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
83.3 51.0	1 1	0.0	0.0	10.3		0.0	0.0	1	0.0	í		ğ
)	Oxylebius pictus	is pict	us			 		
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
73.3 50.0 76.7 60.0 82.0 46.0 86.7 40.0 86.7 45.0	0.0	0.0	0.0 0.0 0.0 0.0	10.2	0.0	0.0 0.0 10.7 0.0	0.0 11.8 0.0 0.0	0.0	00000	1 1 1 1 1 1	11111	3 T I I I I
		1			Zaniole	Zaniolepis spp	å					
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
70.0 51.0 76.7 48.0 80.0 55.0 82.0 46.0	i 1 † 1	9.3 10.0 0.0	0.0 0.0 0.0 9.7	0.0	0.00	0000	0.00	0 0 0 1 1 1	0.0	1 1 1 1	1 1 1 1	1 1 1 1

TABLE 4. (cont.)

					Zanı	Zaniolepis	spp. (c	(cont.)					
STATION		NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
1 8	1 - 3	0 4	0.0	0.00	20.5			0.0	1 1	0.0	1 1	t i	1 1
100.0 116.7	29.2 40.0		0.0			0.0	2.5	1 1	0.0		0.0	i I	1 1
)						Scorpaena	ena spp	•					
STATION		NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
0	1 5		4	0.0	1 .		1 .		0.0	21.2		ı	1
13.		1	0	+				8	1	ı		I	ł
16.	5	I		ł	i			1	1 1	1 1	•	1 1	l I
16.	ů,	1 1	0.0	1 1	1 1			l i	1 1	ı	5.1	i	ŀ
120.0	45.0			í	ı			ı	ı	ı		ŀ	I
						Sebas	Sebastes spp.	•			 	 	!
STATION		NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
10	10			1 4			25.8			1	ı	ı	ı
		1	1	5.	ţ	161.5	9	1	2	1	ı	1	ı
	5	ı	ı	98.4	ı	9	113.0	I		l	1	1	t i
0	0	1	1	0	1	ı	9.	ı	∞ c	1 1	1 1		1 1
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0.09	0.07	l I	1 1	1 1	21.7	1	32.3	ı	24.9	i	1	1	ı
		ı	1	1	0	ļ	8	ı		ı	ı	ł	ı
	0	ı	14.	26.	1	17.	0	ı	4	ı	1	1 1	1 1
<u>ش</u> ا	2.	ı		372.	1	χ Σ Σ	00°	l 1			l	1	ı
	n c	ł I		0.00	1 1	298.8		1	49	í	l	1	1
, c	2.0	t		0	ı	1	1	ı	į,	ı	ı	1	ì
 M	0	I		ļ	0.0	١	22.5	1	2	I	ı	1	1 (
3	0.	1		ı	0.0	1	1 1	1 1	- c	1 1	H	1	ŧ
÷.		F	, F	1 5	0.0	_	0 - 0	ı	87.	ı	1	i	ı
ه د	y ⊂	1		, ,	ł			1	18.	1	ŧ	1	ı
9		ł	58.	87.9	ı	504.4	52.5	l	9	i	I	ı	ı
9	0	1		9	ı	0		ı	40.	ı	ì	1	ı
9	5.	ı	0			ı	1 0	ı	₹ 0	ŧ	i i	1 1	1 1
9	0	ł		ı	10.9	ı	10.3	1 1	ט ע •	1 1	1 1	1	. 1
ه ف	0,	t		<	0.0	10	. ا	1 1	17.3	57.2	1	ŧ	1
	- ~	1 1		51.8	ı	9	48.5	1	.	233.1	1	ı	ı
0	0.	ı	10.	2	1	9	2.	75.5	1	-	ı	l	1

70.0 65.0	.0 = 2 200.4 1 200.4 1 10.1	488 69.6 0.0 3.0 3.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1	1 1				1
3.3 50.0 - 0.0 - 2 2 0.0 - 2 0.0 - 0.0 - 0.0 0.0 - 0.0	.0	0000018	1	ı	ı	1	ı
3.3 50.0 84.6 30.9 - 200.4 1 3.3 53.0 - 27.4 16.1 - 200.4 1 3.3 53.0 - 0.0 0.0 0.0 - 50.04 1 3.3 370.0 - 0.0 0.0 0.0 - 50.04 1 50.0 - 50.0 <td>81.7 24. 200.4 10. 10.1 0. .0 - 50. .0 - 0. .0 - 0.</td> <td>600016</td> <td>I</td> <td></td> <td>ı</td> <td>ł</td> <td>ı</td>	81.7 24. 200.4 10. 10.1 0. .0 - 50. .0 - 0. .0 - 0.	600016	I		ı	ł	ı
3.3 53.0 - 27.4 15.2 - 200.4 1 3.3 60.0 - 0.0 0.0 0.0 - 50.0 - 55.7 4 - 55.7 4 - 55.7 4 - 55.7 4 - 55.7 - - 55.7 - - 55.7 - - 55.7 - - 55.7 - - - 55.7 -	200.4 10. 10.1 0. 10.1 0. 0.0 - 50. 0.0 - 0. 20.8 48. 20.8 48.	00016	ı	0	١	ı	ı
3.3 60.0 31.4 16.1 10.1 3.3 46.0 10.0	10.1 0. .0 - 50. .0 - 0. .0 - 0. .0 56.7 0. 20.8 48.	0016	ļ	89.7	ı	ı	ı
3.3 65.0 0.0 <td>.0 - 50. .0 - 0. .0 - 0. .0 56.7 0. .20.8 48.</td> <td></td> <td>I</td> <td></td> <td>1</td> <td>\$ {</td> <td>ı 1</td>	.0 - 50. .0 - 0. .0 - 0. .0 56.7 0. .20.8 48.		I		1	\$ {	ı 1
3.3 70.0	.0 - 0. .0 - 0. .0 56.7 0. 50.8 48. 20.5 10.	1 6	ı		1 !	l 1	1 1
3.3 80.0	.0 - 0. .0 56.7 0. 50.8 48. 20.5 10.	· ·	ı		į	1	l
3.3 90.0	.0 - 0. 56.7 0. 50.8 48. 20.5 10. 220.8 0.		ı		I	1	1 -
6.7 48.0 - 43.2 504.4 - 56.7 56.7 56.7 56.7 56.7 56.7 56.7 56.7 56.7 56.7 66.7 66.7 66.0 - 20.0 66.7 66.0 - 20.0 66.7 66.0 - 20.0 66.0 - 20.0 66.0 - 60.0 - 60.0 - 60.0 - 60.0 - 60.0 - 60.0 - 60.0 - 60.0 - 60.0 - 60.0 - 60.0 - 60.0 - 60.0 - 60.0 - 60.0 - 60.0 - 60.0 - 20.0 - 20.0 - 60.0 - 20.0 - 20.0 - 20.0 - 20.0 - 20.0 - 20.0 - 20.0 - 20.0 - 20.0 - 20.0 - 20.0 - 20.0 - </td <td>56.7 0. 50.8 48. 20.5 10. 220.8 0.</td> <td>0</td> <td>ı</td> <td></td> <td>ì</td> <td>I</td> <td>ļ</td>	56.7 0. 50.8 48. 20.5 10. 220.8 0.	0	ı		ì	I	ļ
6.7 51.0 - 43.2 504.4 - 50.8 4 6.7 55.0 - 0.0 0.0 - 220.8 1 6.7 55.0 - 0.0 0.0 0.0 - 220.8 1 6.7 70.0 - 0.0 0.0 0.0 - 220.8 1 6.7 70.0 - 0.0 0.0 0.0 <	50.8 48. 20.5 10. 220.8 0.		ı	ر د د د	1	!	1 (
6.7 55.0 - 78.9 33.1 - 220.5 1 6.7 60.0 - 0.0 0.0 - 220.8 1 6.7 60.0 - 0.0 0.0 - - 220.8 1 6.7 70.0 - 0.0 0.0 - - 220.8 1 4 4 4 4 4 4 4 4 4 4 4 4 4 4 6 220.8 4 1 2 3 3	220.8 10.	3.	ı	.17	ļ	l	1
6.7 60.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	.0 8.022	າ ຕໍເ	ı				1
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$\begin{array}{cccccccccccccccccccccccccccccccccccc$)	•	۱ ۱		ı	ı	ı
$\begin{array}{cccccccccccccccccccccccccccccccccccc$.2 - 2.	÷ c			ı	ı	ı
0.0 55.0	4T.4 42.	°α	1	0 0	ı	ı	ı
20.0	612.5	4	1	11:	1	1	i
2.0 46.0 - 11.0 524.3 367.2 - 26 2.3 40.6 - 0.0 3.8 7.2 - 7 3.3 42.0 - 10.3 99.4 410.4 - 20 3.3 42.0 - 107.2 9.7 273.8 - 20 3.3 55.0 - 107.2 9.7 273.8 - 23 3.3 70.0 - 0.0 0.0 - 4 14 - 4 14 - 14 - 14 - - 4 -	- 20.	2	ı	'n	ı	1	ŧ
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7 35.0 0.0 - 291.8 235.4 - 2 7 40.0 32.4 - 92.2 832.1 - 47 7 40.0 19.6 - 3626.0 3852.6 - 60 7 55.0 19.3 - 117.8 181.5 - 60 7 60.0 20.4 - 4.8 184.3 - 60 7 70.0 0.0 - 0.0 - 0.0 - 117.8 184.3 - 1 7 80.0 0.0 - 0.0 - 0.0 - 0.0 - 0.0 - 0.0 - 0.0 - 1 1 1 1 1 1 1 1 3 - 1 0 - 0 0 0 - 0	4.5 - 0.		1		ı	ı	ţ
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3.3 45.	0	1	10.	0	ı		٠ ا د	ı	0			ı
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5.0 30.	l		1	ı			ı			ı	ı	1
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6 7 35	1	ď	ω,	ı			ŧ	0	0	ı	i	ı
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6.7 45	1			ł	0	0	ı	0	0	i	ı	1
7 50	1			ı			ı		0	ı	ı	ı
6 7 55	1		0	ı	9.8		ı			ı	ı	ı
6 7 60	1			1			t		0	ı	ı	ı
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03 2 20	J				1	7	ı		6	ı	1	ł
03.3 35	I			0	ı		ı			ı	ı	ı
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13.3 30.	ı	0	l	i		-				0		

TABLE 4. (cont.)

					Sel	Sebastes spp. (cont.	spp. (c	ont.)	! ! !	 	1		
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13.3	1 4	1 1 1			0.0	ı	31.6	i	i	1		i	1
13.3	0	l		ı	0.0		4.8	1	ı	i		ì	ı
16.7	5.	I		1	1	٥		1	1	ı		ı.	! !
16.7	0	80	•	ı	ı	2	57.0	ł	1	1 1		ı	i I
16.7	5.	ı		1	1	190.7		1 1		1 1	0.0	1	ı
16.7	0.	ı		i i	1 1	٠ ٨		ı	ı	i		ı	1
16.7	n c	l }		1	ı			1	ı	ı		1	ı
18.7		I		ı	ı			I	+	i		i	ı
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76.7	٠,	1		í	ı	•	8	ı	ı	ı	1	ŀ	ı
26.7	, ,	1	•	1	i	i	9	i	1	ı	ı	1	1
26.7	0	ı		ı	ı	ł	2	1	i	ı	ı	ı	ı
30.0	8	ı		1	ł	-		1	ı	1	ı	1	ŀ
30.0	0.	ı		l	1	0.0	د	ł	I	l	ı	1 1	<u> </u>
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33.3	5.	ţ		ı	ı	ı		ı	1	1	1 1	ı ı	1
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33.3	ĵ	ì		l	I								
						Sebastes	s aurora	ra		!		1	1
STATION	1	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
	10		1		 	į –	1 4		0.0	1	I	1	1
7.9		1	. 0	0.0	1	0.0	0.0	ı		ŀ	1	ı	1
6.7		I		; ; ;	I			ŀ	10.6	1	1	I	ı
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3,3	3	ı			I	•		•	ı		1 1	1 1	1 1
6.7	٠ د د	l i			1 J	000		47.2	i 1		1 1	ì	ı
6.7	0	ŀ	• •		0.0)))		0	ł		ı	i	i
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TABLE 4. (cont.)

				Seba	Sebastes au	aurora ((cont.)					
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3 3 42	1 1 1 1 1 1 1	•	0.0	0.0		۱ ،	0.0	ı		ì	ı	١
	1	0.0	0.0	0.0	ı	0.0	0.0	1	5.8	ı	I	1
3.3 70.	ı		0.0	1	ı	10.2	0.0	ŀ	0.0	-	1	1
3.3 60.	0.0		0.0	0.0	1		0.0	1	0.0	ı	1	ł
35.		0.0	0.0		0.0		I	0.0	0.0	i	í	i
					Sebastes	s jordani	ini					
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
0.0 52.		ì	4.0		0.0	0.0		0.0		1	ı	1
3.3 52.	1			ı	0.0	0.0	1	0.0	ı	1	1	ı
3.3 55.	1	0		ı	0.0	31.8	ı	0 " 0	1	1	i	1
3.3 60.	ı			ı	0:0	173.8	1	0.0	ŧ	ı	ı	ı
0.0 53.	ı			ł	0.0	19.4	ŧ	ι	0.0	ı	ı	ı
3.3 70.	1			0.0	ı	20.2	i	ı	0.0	ı	ı	ı
6.7 51.	1		51.	i	0.0	0.0	0.0	ı		1	ı	ı
0.0 55.	ı	0.0				0.0	0.0	ı	0.0	ı	l	ı
2.0 46.	1			0.0	ı	0.0	0.0	l	0.0	I	ı	I
3.3 42.	ı	8			ı	0.0	9°0	ŀ	0.0	ı	l	1
3.3 80.				1 0	ı	0.0	2.5	1 1	•	l	l I	1 1
6.7 33.		1		0.0	I	20.0		1		۱ ۱	1	ı
86.7 35.0		1 1	000		1 1	ħ•77	0.0	1		ì	ı	ŧ
6 7 55	0	1		0 1	ı	0.0	18.1	1	0.0	ı	ı	ı
3.3 28.		ı		0.0	ı	11.0	0.0	ŧ	0.0	1	1	ŧ
3.3 35.		1		4	ı	6.6	0.0	1	0.0	1	1	I
3.3 40.		i			ı	5.3	0.0	ı	0.0	ł	ı	1
3.3 50.		ł			1		11.0	1	0.0	ı	1	1
5.0 30.		ı	1			1	ı	ı	I	ı	ı	ı
6.7 32.	I			1	0.0		ı			i	ı	I
6.7 35.	ı	0.0	0.0	I	0.0	3.9	ı	0.0	0.0	ı	ı	ı
3.3 30.	ı			0.0	ı		ı			ı	ı	1
					Sebastes	es levis	S					
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
.06				0.0	ı		ı	ı	10.3	ł	į	ł
3.3 53.	1		5.1		0.0			1		ı	ı	ı
86.7 45.0	0.0	ı	42.4	0.0	I	0.0	0.0	ı	0.0	ı	ı	ļ
86.7 60.					ı			1		ı	ı	ı
3.3 30.	ı	0.0			1		1	0.0		ì	1	ı

TABLE 4. (cont.)

	SEP. OCT.	1	1		1		1	1			SEP. OCT.	1			1																												
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	JUNE	1	ł	ŧ	1	ı	i	ı	1		JUNE																										• • • • • •		• • • • • • •		• • • • • •		• • • • • •
naldi	MAY	ı	1	i	1	1	1	1	ı	pinis	MAY	 	į	ii	1 1 1	1111					0.0	• •																					000000000000000000000000000000000000000
macdonaldi	APR.	19.0	27.2	4.2	14.8	19.5	34.4	16.3	137.7	paucispinis	APR.	1																		6000001000000000000	60000010000000000		6000001000000000000000000	000000000000000000000000000000000000000	000001000000000000000000000000000000000	000000000000000000000000000000000000000	000000000000000000000000000000000000000	000001000000000000000000000000000000000	900000 000000000000000000000000000000	000000100000000000000000000000000000000	000000100000000000000000000000000000000	00000010000000000000000000000000000000	00000010000000000000000000000000000000
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S	FEB.	1	1	1	ı	١	1	ı	ı	Se	FEB.			0.0	0.0	1	0.0		1 . 3 3		1 . 3 3	1.3	1 . 3 3	1.3	•		1	1								:	i =	i =	: -				
	JAN.		ı	1	1	1	1	ğ	ı		JAN.		10.3	10.3	10.3	10.3	10.3 28.1 0.0	10.3 28.1 0.0 0.0	10.3 28.1 0.0 0.0 9.8	101800610	10.98	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	000000000000000000000000000000000000000	100000000000000000000000000000000000000	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	28. 28. 00. 00. 10. 10. 00.	1018006107000000	28. 28. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	28. 28. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	28. 28. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.	28. 00. 00. 00. 00. 00. 00. 00. 00. 00. 0	28. 00. 00. 00. 00. 00. 00. 00. 00. 00. 0	28. 00. 00. 00. 00. 00. 00. 00. 00. 00. 0	10. 00. 00. 00. 00. 00. 00. 00. 00. 00.	10.0 00.0 00.0 00.0 00.0 00.0 00.0 00.0	288. 00. 00. 00. 00. 00. 00. 00. 00. 00.	28. 00. 00. 00. 00. 00. 00. 00. 00. 00. 0	28 00 00 00 00 00 00 00 00 00 00 00 00 00	288 00 00 00 00 00 00 00 00 00 00 00 00 0	288 00 00 00 00 00 00 00 00 00 00 00 00 0	2 8 8 2 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	28 00 00 00 00 00 00 00 00 00 00 00 00 00
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				Sebaste	Sebastes paucispinis	ispinis	(cont.)	(•		1		
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
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6.7 35.	I	0.0) [0.0	A . A	1			1	ı	1
6.7 40.	1 1		× ×	ı	0.0		1			ı	1	1
6 7 55	ı		25.4	1	0.0		1			ı	ì	t
00 0 29	ı		0.0	1	0.0		I			I	ŀ	ı
00.00	1		0.0	1	0.0		į			I	1	E f
103.3 40.0	1 1	0.0	0.0	0.0	l I	14.8	l 1	0.0	0.0	ll	1 1	1
06./ 40.		•			Sebastolobus		spp.					
						- 1						
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
7 2 2				1		 			å	1	ı	ı
0.0	1 1	1	1		ı	10.3	1		ı	1	1	ı
0.0	1 1	1	ļ	0.0	ı	21.6	ı		1	1	1	ι
0.0	1	1	1	0.0	ı	9.6	ı		i	i	1	I
3.3.52.	1				4.9		ı	0	ı	1	ì	ı
3.3 60.	1		0.0	1			ı		I	ı	1	l i
6.7 70.	1		ł	0.0	ı	8	! !		0		1	ı
0.0 80.	I		10	0.0	- '	6		1	6 (1	ı	ı
3.3 50.	1 1			0	T • /	0 0	11.3	1	0.0	1	١	ı
3 3 90.	ı		0.0	0.0	ı			ı		ŀ	1	ı
6.7 55.	I	9	0.0	1	10.2		0.0	ı		\$	1 1	1 1
6.7 70.	ł		0.0	0.0	ı			I		ı	1 1	
6.7 80.	ı		0.0	0.0	ı					1 1	l I	ı
0.0 70.			0.0		1 1	0		- 1		ı	ı	ı
6.7 50.		ı			1	0 1		1		1	ı	i
126.7 50.0		0.0		ı	1	14.1	i	ı	1	1	ι	ı
					Prionotus	tus spp	•					
NOTERES	NON	DEC	NAL	FER	MAR	APR.	MAX	JUNE	JULY	AUG.	SEP.	OCT.
SIRIION												
20.0 24.	l		ı	ı	0.0	0.0	ŧ	1	1		1 1	1 1
120.0 38.5	1 1	0.0	1 1	1 1	0.0	0.0	1 1	l I	ll	o. 6	1	ì
.00 0.02	ł	0										
					Blen	Blennioidei			1 1 1 1 1			
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
3.3 50			3.8	 	0.0	0.0		0.0	1	ı	ı	1 1
63.3 60.0	í			1	9.6	0.0	I	0.0	ı	I	i	١

TABLE 4. (cont.)

	OCT.	11111		OCT.		1 1	ŀ	1	1	ı	1 1	ł	ì	f 1		OCT.	
	SEP.	11111		SEP.	i i i	1 1	ı	ł	1	1	1 1	t	ı	1 1		SEP.	
	AUG.	11111		AUG.	11	1 1	ı	j	1	I	1 1		۳ ر د ر			AUG.	00.00
	JULY	000000		JULY	0.0	0						•	1	1 1		JULY	
	JUNE	0.0		JUNE		1 1	ı	0.0	0.0	0.0	0.0		1	1 1		JUNE	0.000.000.000.000.0000.0000.0000.0000.0000
ıt.)	MAY	00000	spp.	MAY	8.4	117.8	0.0	ı	1 1	ı	1 1	ı	ı	J 1		MAY	0.000
lei (co	APR.	0.0 0.0 0.0 0.0 19.1		APR.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	Clinidae	APR.	35.4 35.4 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Blennioidei (cont.)	MAR.	20.0 20.3 11.0	Hypsoblennius	MAR.	1 1 1	1 1	1	0.0		1	1 1	0.0	0.0	0.0	Clin	MAR.	27.4 0.0 0.0 0.0 0.0 0.0
B]	FEB.	20.5 5.1	H	FEB.	0.0	0.0	0.0	ı		0.0		i	ı	1 1		FEB.	0.00
	JAN.	24.0 0.0 0.0 0.0		JAN.	0.0	0.0	0.0	0.0	0.0	0.0	000) •	ı	1 1		JAN.	4 4 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
	DEC.	0.00		DEC.		1 1						0 0		0.6 0.8		DEC.	7 7 7 7 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9
	NOV.	0.0		NOV.	0.0				1 (ı	i i	4	J	l i		NOV.	 0 1 1 1 0 1 1 1 1 1 1
	ON	50.0 51.0 60.0 51.0 35.0			33.0	œ 4		60	. 6	0	25	9 .		. 8		2	50.0 50.0 50.0 50.0 50.0 51.0 51.0 32.0 32.4 32.4
	STATIO	73.3 76.7 76.7 83.3 93.3		E	86 86	0.		96.	03.	03.	90	13.	20.	50		STATION	60.0 63.3 73.3 76.7 80.0 83.3 86.7 100.0 106.7 110.0

TABLE 4. (cont.)

					Clinidae (cont.	e (con	t.)					
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
126.7 33.0		4.3			1	0.0	1	ŀ	ı	1	ł	ł
					Cob	Gobiidae						
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
0 0 50	 				1	0.0	1	2.0	ı	1	ı	ł
3.3 50.	1			ı	0.0		ı	0.0	ı	ı	I	ŧ
6.7 55.	ł			I	7 ° 6	0.0	ı	0.0	i	t	ı	ı
0.0 53.	1			1		0.0	ı	I	10.6	ı	ı	1
3.3 53.	1	0.0		I	10.0	0.0	0.0	ı	0.0	I	I	ı
6.7 48.	i			i				ļ	0.0	ı	ı	I
6.7 51.	I		0	1				ı	0.0	ı	i	ı
6.7 60.	ı			I		0.0		ı	13.3	t	ı	ı
0.0 60.	ı						0.0	ı	0.0	l	ł	ı
2.0 46.	ı				ı	0.0	a	ı	94.0	l	ı	ı
3.3 40.	ı			0.0	I	10.3		ı		ı	ı	l
3.3 51.	I		- 6		ı			ı		ı	I	l
3.3 55.	١			0.0	ı		0.0	I		1	ı	1
3.3 60.					ı	10.6	9	I		1	l	1
6.7 33.		1		0.0	I		20 c	I		ı	ı	i i
6.7 40.		ļ			í			al de la companya de la companya de la companya de la companya de la companya de la companya de la companya de		ł	1 1	1
6.7 45.		ı	•		1 1			۱ ۱		1 1	1 1	1 1
6.7 50.		I	0					i		1	ı	ı
0.65 / 58.0	9.0 0.0	1 1		10.0	1		16.2	I	21.8	ı	ı	i
280	•	ı	• •		1		0	ı		i	ł	ı
0.0		ı			ı			1		1	ı	i
0.0 53.	0	ı			ı			ı		1	ı	ı
0.0 60.		I			1		0	١		ı	1	1
3.3 45.		1		0.0	1			1		ı	ı	l
3.3 55.		ı			1			i		ı	ł .	ı
93.3 60.								1 4		ı	i	i
00.00	I		9	1	0.0		1	2•1		i	ì	1
00.0 30.	ı						t	0.0		ı	ı	l
03.3 30.	l			0.0		9	ı	0.0		1 4	1	l 1
$\frac{3.3}{2}$ $\frac{29}{2}$.	1	0.0	ı	I	0.0	0.0	l	ŀ)	4.0	l i	1 1
16.7 25.	I		I	ł			ł	1	l 1	0.0		: 1
20.0 24.	ļ		1	l		0.0	í	l	I (1	i I
20.0 35.	I	0	I	l			l	l	ı	10	1 1	
20.0 38.	ı		!	ı		0.0	ı	ı	l	0	1	
20.0 50.	I	٠	1	l	I	0.0	í	ı	I		I	

TABLE 4. (cont.)

					Icos	steus a	Icosteus aenigmaticus	icus					
STATION		NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
76.7	51.0 60.0 60.0	0.0	0.0	0.0	0.0	11.0	000	10.5	i i 1	000	1 1 1	1 1 1	1 1 1
					7	Halichoeres		spp.					
STATION		NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
0.00	160		1 .	0.0		0.0	0.0	1 1	5.1	5.0	5.1	1 1	1 1
18.0	. סיר	1 1		1 1	t I	0.0	0.0	1 4	1 1	1 1	19.6 21.1		1 1
120.0	35.0 38.5	1-1	0.0	1 1	l i	0.0	0.0	1-1	1-1	1 1	4.6 15.2	1 1	1.1
					Oxy	Oxyjulis o	californica	nica					
STATION		NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
6.7	5.						0.0	1 0	6.1	1 9	ı	1	1
6.7	5,1	1 1	0.0		1 1	0.0	0.0	0.0	1 1	10./	1 1	1 1	1 1
2.0	9	i				•	0.0		ı	58.8	1	1 (1 1
m. m.	2.	1			0.0	1 1			(1	11.5	1 1	1	1
	.0	ιι	9 0			i			ı		i	ı	ł
6.7	500		1 1		0.0	1 1		0.0	l i	11.1	1 1	1 1	1 1
, , , ,			ı			ı			1		ı	i	ı
6.7	0	10.2	1			1 1		•	1 1		i i	1 1	1 1
0.0	 n m		li			. 1		• •	1		1	ı	i
0.0	0		1 !			1 1			1 1	9 C	i l	1 1	1 1
າຕ	5.	0 0	1			ı			1		ı	ı	ı
3,3	0		1			l i			ιı		1 1	1 1	1 1
2000	50				1	0.0					3	I	ı
0.00	0	ı				0.0		ı			1 !	1 1	1 1
03,3	o	i I				1 8		1 1		0 0	l	ı	ŧ
03.3	5	t				ι		ı			i	i	ı
03.3	0.5	1 1				1 1		i i			1 1	f 1	1 1
110.0	0.0	1 1	000	000	000	1 1	000	1 1	0.0	₹. 4	1 1	1 1	1 1
10.0					•								

TABLE 4. (cont.)

116.7 50.0 0.0 0.0 0.0 120.0 45.0 0.0 0.0 0.0 STATION NOV. DEC. JAN. FEB. MAR. AFR. MAY 116.7 55.0 0.0 0.0 0.0 0.0 116.7 55.0 0.0 0.0 0.0 0.0 116.7 55.0 0.0 0.0 0.0 0.0 116.7 55.0 0.0 0.0 0.0 0.0 116.7 55.0 0.0 0.0 0.0 0.0 116.7 55.0 0.0 0.0 0.0 0.0 116.7 55.0 0.0 0.0 0.0 0.0 116.7 55.0 0.0 0.0 0.0 0.0 116.7 55.0 0.0 0.0 0.0 0.0 116.7 55.0 0.0 0.0 0.0 0.0 116.7 55.0 0.0 0.0 0.0 0.0 116.7 55.0 0.0 0.0 0.0 0.0 116.7 55.0 0.0 0.0 0.0 0.0 116.7 55.0 0.0 0.0 0.0 0.0 116.7 55.0 0.0 0.0 0.0 0.0 116.7 55.0 0.0 0.0 0.0 0.0 116.7 55.0 0.0 0.0 0.0 0.0 116.7 55.0 0.0 0.0 0.0 0.0 116.7 55.0 0.0 0.0 0.0 0.0 116.7 55.0 0.0 0.0 0.0 116.7 55.0 0.0 0.0 0.0 0.0 116.7 55.0 0.0 0.0 0.0 0.0 116.7 55.0 0.0 0.0 0.0 116.7 55.0 0.0 0.0 0.0 116.7 55.0 0.0 0.0 0.0 116.7 55.0 0.0 0.0 0.0 116.7 55.0 0.0 0.0 0.0 116.7 55.0 0.0 0.0 0.0 116.7 55.0 0.0 0.0 0.0 116.7 55.0 0.0 0.0 0.0 116.7 55.0 0.0 0.0 116.7 55.0 0.0 0.0 116.7 55.0 0.0 0.0 116.7 55.0 0.0 0.0 116.7 55.0 0.0 0.0 116.7 55.0 0.0 0.0 116.8 0.0 0.0 0.0 116.9 0.0 0.0 0.0 116.9 0.0 0.0 0.0 116.9 0.0 0.0 0.0 116.9 0.0 0.0 0.0 116.9 0.0 0.0 0.0 116.9 0.0 0.0 0.0 116.9 0.0 0.0 0.0 116.9 0.0 0.0 0.0 116.9 0.0 0.0 0.0 116.9 0.0 0.0 0.0 116.9 0.0 0.0 0.0 116.9 0.0 0.0 0.0 116.9 0.0 0.0 0.0 116.0 0.0 0.0 0.0 116.0 0.0 0.0 0.0 116.0	NOV. DE	DEC. JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT
Semicossyphus pulch Semicossyphus pulch		 	 	0.0	0.0	1	1 1	1 1	5.1 8.8	1 1	1 1
55.0 - 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0			Sem	icossyp	ind snu	cher					
55.0 - 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0		J.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT
Chromis punctipinnis NOV. DEC. JAN. FEB. MAR. APR. MAY 42.0 42.0 42.0		0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.0	0.0	0.0	0.0		10.7	5.1		1 1 1
55.0 - 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0			Ch_1	omis pu	ınctipi	nnis					
55.0 - 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0		J	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT
42.0		1 -			0.0			10.7			
55.0	ì	0	0.0		0.0		ı	10.4	ı	1	ı
25.0 26.7 26.7 26.7 26.0	1 0	0.		1	0.0		1 1	17.3		1 1	1 1
30.0 - 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.		00		ı	0.0		1	9.1	1	1	1
35.0 - 0.0 0.0 0.0 - 0.0 35.0 - 0.0 0.0 0.0 - 0.0 35.0 - 0.0 0.0 0.0 - 0.0 35.0 - 0.0 0.0 0.0 - 0.0 39.0 - 0.0 0.0 - 0.0 0.0 39.0 - 0.0 0.0 - 0.0 38.5 - 0.0 0 0.0 0.0 55.0 - 0.0 0 0.0 55.0 - 0.0 0 0.0 55.0 - 0.0 0 0.0 37.0 - 0.0 0 0.0 MOV. DEC. JAN. FEB. MAR. APR. NOV. DEC. JAN. FEB. MAR. APR. NOV. DEC. JAN. FEB. MAR. APR.		0 0.		0.0	0.0	ł	9.3	0.0	i	I	ı
35.0	ı	0 0.	-	ł	0.0	1	0.0	20.9	i	1	1 1
50.0	1 1			1 1	000	1 1		0 × 0	1 1	l !	l I
39.0 - 0.0 0 0.0 25.0 - 0.0 0.0 38.5 - 0.0 0.0 45.0 - 0.0 0.0 60.0 0.0 60.0 37.0 - 0.0 0.0 87.0 - 0.0 9.0 87.0 - 0.0 9.0 87.0 - 0.0 9.0 87.0 - 0.0	1	0.0		0.0	0.0	i) 	ì	5.1	ı	t
25.0 - 0.0 0 0.0 38.5 - 0.0 0 0.0 38.5 - 0.0 0.0 50.0 - 0.0 0.0 50.0 - 0.0 0.0 37.0 - 0.0 0.0 Hypsypops rubicund NOV. DEC. JAN. FEB. MAR. APR. NOV. DEC. JAN. FEB. MAR. APR. NOV. DEC. JAN. FEB. MAR. APR.	1		1	0.0	0.0	I	I	١	19.6	I	ı
38.5 - 0.0 - 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	ı	0.	í	0.0	0.0	١	ı	ŀ	16.9	I	ı
50.0 - 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	1	٠.	1 1	0.0		í l	l 1	1 1	26.3	1 1	1
37.0 - 0.0 - 0.0 0.0 Hypsypops rubicund NOV. DEC. JAN. FEB. MAR. APR. 31.0 - 0.0 0.0 0.0 - 0.0 Carangidae NOV. DEC. JAN. FEB. MAR. APR.			ı	ı	0.0	ı	ı	1	49.4	ı	1
Hypsypops rubicuno NOV. DEC. JAN. FEB. MAR. APR. 31.0 - 0.0 0.0 0.0 - 0.0 Carangidae NOV. DEC. JAN. FEB. MAR. APR.	I	0.	ı	0.0	0.0	ı	ı	ŀ	42.5	1	I
31.0 - 0.0 0.0 0.0 - 0.0 Carangidae NOV. DEC. JAN. FEB. MAR. APR.			HyE	sdodhs		snpu					
31.0 - 0.0 0.0 - 0.0 Carangidae NOV. DEC. JAN. FEB. MAR. APR.	 	J	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
NOV. DEC. JAN. FEB. MAR. APR.		0 0.	0.0		0.0		3.8	0.0	i	ı	1
NOV. DEC. JAN. FEB. MAR. APR.				Cara	ngidae						
		D .	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
120.0 50.0 - 0.0 0.0					0.0				9.9		1

TABLE 4. (cont.)

						Seriola lalandi	laland	7.i		1			
STATION		NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
103.3	45.0		0.0	0.0	0.0	1	0.0	1	0.0	10.6	ι	ı	1
					Tra	Trachurus	symmetricus	ricus					1
STATION		NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
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Trachurus symmetricus (cont.)

OCT. OCT. OCT. OCT. 1 1 1 1 - 1 - 11 SEP SEP. SEP SEP 1 - 1 - 1I - I - I36.11 8.8 25.2 10.1 8.9 AUG. AUG. AUG. JULY 4.6 JULY 18.3 45.7 JULY JULY JUNE JUNE 0.0 JUNE JUNE ļ 1 1 1 0.0 0.0 MAY MAY MAY Coryphaena hippurus 1 1 1 Haemulidae Gerreidae 0.0 0.00 0.00 APR. APR. APR. APR. 0.00 MAR. 0.0 MAR. MAR. 1 0.0 0.0 0.0 FEB. FEB. FEB. 0.0 000000000040000001111 0.0 0.0 JAN. JAN. JAN. 0.00 0.0 DEC. DEC. DEC. DEC 0.0 0.0 NOV. NOV NOV NOV F 1 1 28.0 45.0 36.0 26.7 45.0 45.0 45.0 440.0 445.0 7000.0 700.0 700.0 700.0 700.0 700.0 700.0 700.0 700.0 7 STATION STATION STATION STATION 93.3 106.7 113.3 116.7 90.0 120.0 123.3 1000.0 1000.0 1000.0 1000.0 1003.3 1003.3 1003.3 1003.3 1000.0 1110.0 1113.3 113.3 113.3 113.3 113.3 113.3 113.3 113.3

TABLE 4. (cont.)

				щ	Haemulidae (cont.	lae (cor	ıt.)				1	
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73.3 60.0		0.0	0.0	0.0	0.0	0.0	0.0	1 1	11.0	t I	1 1	1 1
				Cau	Caulolatilus princeps	us prin	sdebs		 			
STATION	NOV.	DEC.		FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
106.7 32.0		0.0	0.0	0.0	0.0	0.0	1 1	0.0	8.7	5.0	į I	i I
					Scia	Sciaenidae						
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100.0 30.0 103.3 29.0 103.3 30.0	1 1 1	000	0.00	0.0	0.0	2.5 3.8 34.1	1 1 1	0000	0.0	1 1 1	+ + +	1 1 1
				Che	Cheilotrema	ma saturnum	rnum		 			
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
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				Ge	Genyonemus	s lineatus	stus	1 3 1	1 1			
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
60.0 63.3 52.0 63.3 52.0 66.7 66.7 73.3 50.0 76.7 51.0		41.5 116.6 119.6 16.9 53.0	42.7 10.7 9.8 0.0 6.9 177.1	11111111	701.5 29.2 0.0 0.0 0.0 48.6	0000000	0.00	00000111	0000	1 1 1 1 1 1 1 1	1111111	1 1 1 1 1 1 1 1

				Genyonemus		lineatus	(cont.	<u> </u>				
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					Seriphus	s politus	ns					
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TABLE 4. (cont.)

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TABLE 4. (cont.)

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TABLE 4. (cont.)

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TABLE 4. (cont.)

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TABLE 4. (cont.)

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	FEB.	0 1 1 0 0 4 1 0 0 0 0 1 1 1 0 0 0 0 0 0	FEB.	40.5 40.5 17.9 0.0 0.0 0.0
	JAN.	00000000000	JAN.	24.6 20.0 18.7 0.0 0.0 21.7 21.7 21.7 21.7 21.7 21.7 0.0 19.6 19.6
	DEC.	0000040000000000	DEC.	124.4 51.0 9.6 8.5 9.6 10.4 10.4 10.5 20.2 20.2 10.5
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	SEP.	1	1	i	١	I	ŀ	i	ı	ı	1	ı	ı	ı	1	1	ı	ı	1			1	ı	ı	i	ı	ı	t	ı	ı	ı	t	ŧ	ı	ı	ı	ı	ı	ł	ı	t	ı	ı	ı	1	ı	ı	ı
 	AUG.	1	ı	١	1	ı	1	ı	ŀ	ı	ı	ı	ı	ı	5 A			0			, י	'n.		-	5.1		ŝ		4		•		,	9 6			I	ı	i	1	I	1	i	ı	ı	t	1	ŀ
	JULY	0.0	0.0			- 0						4			•	1	1	ı	. (ł	ı	1	I	ı	ı	i	ı	1	Į	i	ı	1	ı	į	ı	ı	ı	ł	1	ı	ı	i	ı	1	1	ı	ı
	JUNE	10.1		5.1		6					1				•	1					ı	ı	t	ı	ı	ı	i	ı	ı	ŀ	Į	ı	ı	ł	i	ı	ŀ	ı	ı	1	i	1	1	t	1	ı	1	1
(cont.)	MAŸ	ı	ł	4	ł	ı	ı	í	ł	ı	ı	ı	ı	ł	ı	ı			ļ I	ı	1	ŧ	ŧ	ı	ı	+	ı	ı	ı	1	ı	I	ı	ı	ı	ı	ı	ı	ı	i	1	1	Ι	1	ı	ı	ł	ı
s spp.	APR.	٠ ا	0.0						-				•	0		0	0				9			4	86.		08.	0	27.		4	÷	46.			22.	<u>.</u> .	5	1.		4.	0					4	68.9
Citharichthys	MAR.		0.0			ı	١	ı	1	ı	1	ŧ	ı	ı			8	1	1		0	8			0.0	0			0				ı				0.0		ı	1	ı		0.0		1	ı	1	ı
Citha	FEB.		ı	ł	ı		0.0						•	8	0	1		0.0	0	0	ı	ı	ı	t	1	ı	ı	1	ı	ı	1	ł	ı	ı	ı	ı	ı	ı	1	I	ı	1	ı	ı	ı	I	ı	i
	JAN.		10.2							0	•		8	٠	0		I	I	I	ŀ	ı	ı	ı	1	ì	ı	1	I	ı	j	I	ŀ	1	1	I	ι	ı	ı	I	1	1	ı	ı	ŀ	ı	1	1	1
	DEC.								•						0				8			0		- 6		5			0		- 0			0			9		0			4		0				0.0
	NOV.	1	ı	1	ì	ŀ	1	ı	ı	ı	ı	ı	ı		i	I	ļ	ł	ı	1	ı	ŀ	ı	4	ı	1	ı	ı	1	ı	ı	1	ı	ı	ı	ı	ì	ı	1	ı	ı	ŀ	ł	ı	ı	1	ı	1
	Z(10	Š	6	0	6	0	ا د د	·	•		, u	שר	n c		,		Ω		ç.	0	5	0	5.	0.	6	ς.	4	5.	0	5.	&	5.	0.	7.	2	5	0	5.	0	'n	8	0	0) ៤	30.0
	STATION	1 4	ء ف	000	00	03.	039	. ~				900	900	9	9	57	5,5	13.	13.	13.	16.	16.	16.	16.	9	18.	19.	20.	20.	20.	20.	20.	20.	20.	23.	23.	23.	23.	26.	26.	26.	30.	30.	30.	30.	,	, ~	133.3

TABLE 4. (cont.)

					Citha	Citharichthys	s spp.	(cont.)					
STATION	1	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
33 3	1 =		1 4				14.0	ı	1	1	ı	1	1
136.7 2	2.0	ı	41.7	ı	i	1	l	t	1	i	ı	ì	ŀ
36.7	6	ı		ı	1	ı	ı	ı	1	ı	ı	1	ŀ
36.7	5.	1	9.	1	t	1	I	1	ı	ı	i	ı	ı
					Cith	Citharichthys		stigmaeus				1	
STATION	 	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
0.0	5.	1	1	29.5	 	0.0	0.0	ı	0.0	1	ı	ì	ı
0.0	0	ı	ı	41.2	ı	ı	0.0	ı	0.0	ı	ı	ı	i
0.0	0.		t	ı	15.7	ł	0.0	1	0.0	ı	ı	1	1
0.0	0.	ı	1 -	1 9	8.1	1 0	0.0	1		1 1	1 1	i I	1 1
۳. د	٠ د د	1	6	0.0	1 1	57.8		l I		ı	1	. 1	ı
	ک	1 1		י סו	ı	2) • I	1		1	1	ı	i
. ~	, 0	ı		1	0.0	ı	0.0	ŧ	0.0	ı	ı	1	ı
, m	. 0	ł	9	à	0.6	1	ı	ì		ı	1	ı	ı
6.7	0	I	6	32.6	!	0.0	0.0	ł		ı	ı	ı	1
6.7	5	ŀ	9	9°6	1	0.0	0.0	ı			í	ı	1
6.7	0.	ı	4.	0.0	1	20.1	0.0	I		ı	ı	ı	ŧ
6.7	0	ı	٠ د	(0.0	1 4	0.0	l	0.0	1 4	1	i	i i
0.0	Ϊ,	ı		0.0	1	0.0	0.0	1 1			1 1	1 1	įį
0.0	٠ د	1		10.4	1 1	7.0	0	0 4	. 1		anap	1	ì
				0 1	0.0		11.2	0.0	ı	0.0	ı	ı	1
	، م	ı		208.3)	30.1		0.0	1	0.0	1	i	i
. m . m	0	i		5	ı	0.0			ı	0.0	ı	ŀ	ı
3,3	5.	1	9.	1	1 1	ı	1 (i	1 0	t	ı	ı
3.3	0.	I	5	0.0	0.0	I	0.0	1 9	ı	0.0	Ι.	i I	ł I
۳. ش	•	i		4. C	0.0	1 1			l I	•	! !	1	1
٠. د د د		1	•	113.2		0.0		10.5	ı		1	ı	1
	, . O	ł		Ξ.	i	0.0			ı		1	ı	i
6.7	0	i		8	ı	11.0			1		l	ı	i
6.7	0	1		0	14.4	1			ı		Ι	ı	ι
0.0	0.	1			ı	0.0			1		1	ł	ı
0.0	0.	1			8.7	ı			ŀ		I	ı	ı
82.0 4	0.9	ι	0.0		0.0	Į.		0.0	1	0.0	1 1	1 1	1 1
2.5	٠,					ł		6	l t		1		ı
7 - 9	ب د		l t			1 1	11.2	0 1	1		ı	ı	ı
6.7	. 0	4.6	ı		0.0	t	21.4		1		ı	ı	ł
6.7	, v		ı	4.7	0.0	l	0.0	0.0	ı	0.0	i	ı	ı
6.7	5		ı	0.0	10.8	i		0.0	ı	0.0	ı	ı	i
6.7	0		ı	6.4	0.0	t	0.0	0.0	ŀ	10.9	ı	ı	I

Citharichthys stigmaeus (cont.)

OCT. OCT. 1 1 1 1 1 1 1 1 SEP SEP. 1 1 1 1 1 1 10.9 0.0 9.6 0.0 0.0 0.0 116.4 0.0 JUNE JUNE 0.0 Paralichthys californicus 0.00 0.0 0.0 10.1 10.0 10.0 10.0 10.0 10.0 MAY Hippoqlossina stomata 10.0 0.0 0.0 0.0 0.0 99.4 10.3 -10.2 3.6 9.4 9.0 0.00 0.00 22.8 0.0 0.0 3.8 4.9 4.5 4000000 10.00 000000 NOV 1111110 60.0 40.6 30.0 45.0 25.0 48.0 51.0 555.0 46.0 42.0 51.0 STATION STATION STATION 70.0 83.3 103.3 120.0 133.3 76.7 80.0 80.0 82.0 83.3 83.3 86.7

OCT.	+ 1 1	,1	1 1	F	ı	i 1	1 1	1 1	1 1	. 1	1	1 1	ı	ı	 	OCT.	1	1 1	 	OCT.	111111111
SEP.	1 1 1	1	1 1	1 1	ı	1 1	1	1	1	1	ı	1 1	ı	1		SEP.	l	1 1		SEP.	1 1 1 1 1 1 1 1 1 1
AUG.	1 1 1	I	()	1 1	ı	i 1	1	1 1	i i			•	15.1	ı		AUG.		0.0		AUG.	1111111111
JULY	0.00	• •			0 0					1 1	ı	1 1		1		JULY	ı	(1		JULY	111111111
JUNE	1 1 1	1			0	5.2			- 4	1 1	ŀ	i	ı	ı		JUNE		1 1		JUNE	000404000 000404000 000404000 0004000000
MAY	0.00		i i	1 1	l I	i i	1	1 1	ı	i	1	ı	1 1	i	pis	MAY		1 1	zachirus	MAY	
APR.	0.0	. 6	5.6	œ c				0.		4 (• •	s liolepis	APR.		9°5		APR.	0 000000
FEB. MAR. APR. MAY JUN	1 1	1 1	4.4 6.5	4.	41.9	1 1	ì	lι	1	1 0	5.1			0.0	Xystreurys	MAR.		0.0	Glyptocephalus	MAR.	10.2
FEB.	107.0		t 1	ı	1 1	0.0	4.	53.2	•	0.0	1	ı	1 1	1	Xy	FEB.	0.0	1 1	GIyp	FEB.	0.00
JAN.	0.0					0.0				1 8	1	ı	1 1	1		JAN.		1 1		JAN.	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
DEC.	 	t t				0.0			0 0				0.0			DEC.		0.0		DEC.	0000000
NOV.	0.0			1	1 1	i	1 1	1 1	1	1	1 1	ı	1 1	1 1		NOV.		1 1		NOV.	[
Z	35.0		0	0.	ه د		. o	7	5.	2	٠ د	0	5,4	8		NO	5.	30.0 38.5		NC	52.5 55.0 60.0 70.0 49.0 55.0 70.0
STATION	86.7	س س	v	96.	00	.0	03.	96.	10.	10.	50	$\frac{20}{20}$.	20.	23. 30.		STATIC	13.	116.7		STATION	60.00 633.33 633.33 663.73 666.77 666.77

Glyptocephalus zachirus (cont.)

OCT. OCT. 1 1 1 11111111 SEP SEP 111 111111111 AUG. AUG. 29.8 29.9 111.0 21.3 13.3 0.0 0.0 0.00 JULY JULY JULY JUNE 12.92 12.93 13.00 13.00 10.01 JUNE 1 1 1 1 1 1 1 1 1 1 1 1 000 10.03 0.00 0.00 0.00 0.00 0.00 0.00 18.9 10.00 11.8 MAY guttulata MAYMAY Lyopsetta exilis 10.00 10.00 0.00 0.00 0.00 APR. APR. 0.0 10.3 10.3 10.3 10.3 10.3 11.3 11.3 11.3 11.3 10.0 1 APR. Hypsopsetta 0.00 MAR. 0.0 FEB. 4.7 FEB. 0000000 4.6 0.0 0.0 JAN. JAN. 00000000 0.0 DEC. DEC. 0 • 0 0.0 NOV. NOV NOV 51.0 28.0 53.0 65.0 53.0 60.0 60.0 70.0 80.0 552.5 552.5 660.0 66 STATION STATION STATION 80.0 90.0 90.0 660.0 660.0 660.0 660.0 663.3 663.3 663.3 770.0 770.0 770.0 770.0 770.0 770.0 770.0 770.0 770.0

TABLE 4. (cont.)

	OCT.		OCT.	OCT.
1	SEP.		SEP.	
1 1	AUG.		AUG.	AUG.
1 1 1 1 1	JULY	0.0000000000000000000000000000000000000	JULY	10.9 0.0 0.0 0.0 0.0 10.5
 	JUNE	0.04	JUNE	0.0 0.0 0.0 0.0 0.0 0.0 0.0
(cont.)	MAY	1.cus	MAY	MAY MAY
	APR.	10.6 0.0 2.28.3 0.0 2.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	APR.	9.6 10.6 0.0 0.0 11.2 10.2 10.2 10.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0
Lyopsetta exilis	MAR.	20.6 20.6 10.6 .0 .0 .0 .0 .0 .0 .0 .0 .0 .0 .0 .0 .0	MAR.	0.0 0.0 0.0 0.0 0.0
Lyops	FEB.	0.0 0.0 0.0 0.0 0.0 Mic.	FEB.	0.0 0.0 0.0 0.0 0.0 1.0 FEB.
	JAN.	0.0000000000000000000000000000000000000	JAN.	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
	DEC.	000000011111100	DEC.	0.00 0.00 0.00 0.00 0.00 0.00 0.00
	NOV.	000000	NOV.	0.0 0.0 0.0 0.0
	LION	0.0 51.0 0.0 55.0 0.0 60.0 0.0 70.0 7.7 45.0 0.3 226.7 3 226.7 3 228.0 3 30.0	LION	13 55.0 14 49.0 17 49.0 17 80.0 10 60.0 10 70.0 10 80.0 10 90.0 10 90.0 11 ON 11 ON 12 55.0 13 55.0
	STATI	880. 880. 883. 990. 1003.	STATI	60.00 60.00 60.00 70.00 70.00 70.00 90.00 90.00 90.00 90.00 60.00 60.00 60.00 60.00

				Parop	Parophrys vetulus	tulus	(cont.)			 		
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
1 4		1				100		 - 			1	
6.7 55.	l		. •	1	0	0.0		1		1	ı	ı
0.0	ı		7 0	. 1	10.2	•		ı	0.0	ì	1	1
0.0	1	•		ı	21.5			1	0.0	ı	ı	1
7 0 00.0	. 1		2.0	10.2	1 1	0.0	0.0	ı	0.0	t	í	ı
2 2 40.	ı			0	ı	10.3	0.0	1	0.0	ı	ı	ı
3.3 40.	ı	• •	0	93.8	ı	0.0		ı	0.0	ı	1	ı
2 2 51	I			20.5	ı	0.0		ı	0.0	ı	ı	ı
2 2 55	1		0.0	10.1	1	0.0	0.0	ı	0.0	1	ı	١
6 7 40.	- 4	1	10.2	0.0	ı	0.0	0.0	ı	0.0	ı	ı	t
6.7 45.		ŀ	9.4	0.0	ı	0.0	0.0	1	0.0	i	ı	1
6.7 55.	0.0	ı	0.0	0.0	ı	0.0	27.1	1	0.0	Į	i	1
0.0 28.		ı	0.0	4.7	ı		9.1	ı		1	ı	ı
3.3 26.		ı	0.0		ı	4.6	9.2	ı	0.0	1	ı	ı
3.3 30.		ı	0.0	0.0	1	9.5	0.0	ı		ı	ı	ı
6.7 29.	•		0.0	1	0.0	9.2	ļ	0.0		ı	ı	I
6 7 30	1		0.0	1	0.0	2.5	ı	0.0		i	1	ı
6 7 32	ı	0.0	0.0	ı	0.0		ı	0.0		ı	1	ı
00 0 00	ı		0.0	ı			i	5,1		I	1	1
30.00	ı	9 1	0.0	1	10.5		1	0.0		ı	1	ı
00.00	1		0.0	4	ŀ		ŀ	0.0		1	I	1
10.0	ı		0	0.0	1	22.6	ı	ı	1	1	ı	ı
16.7.30	ı		ì	•		19.0	1	1	1	0.0	1	i
123.3 36.0	l	0.0	ı	1	0.0		1	1	ı		ı	ı
				Pla	Platichthys		stellatus					
						- 1						1 600
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
3 3 50		4	0.0	1	35.5	0.0	i	0.0	i	i	ı	ı
63.3 52.0	ı	0.0	0.0	ŀ	6.7	0.0	l	0.0	ŀ	1	l	ı
				P	Pleuronichthys	chthys	spp.					
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
96.7 29.0		0.0	0.0		0.0	0.0		0.0	21.4	ı	1	ı
				Pleu	Pleuronichthys coenosus	hys coe	snsoue					
										CIIK	The state of the s	
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	CONE	JOLY	AUG.	SEP.	3
86.7 50.0 96.7 30.0	0.0	0.0	0.0	0.0	0.0	9.5	0.0	0 - 0	0.0	i i	1 1	1-1

TABLE 4. (cont.)

				Pleu	Pleuronichthys decurrens	hys dec	urrens			1	1	
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
70.0 70.0		0.0	 	0.0		0.0	0.0	1	8.6	ı	l	1
				Ple	Pleuronichthys ritteri	thys ri	tteri					
STATION	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
0 7 7 0		1	0		0.0	0.0	0.0	ı	3.5	1	ı	1
3 3 40.	ı	0.0	0.0	0.0	•	0.0		1	48.5	1	ŀ	1
6.7 33.			0.0	0.0	i		- 0	1	7.5	l	ı	1
3.3 26.		ı	0.0	0.0	ł		0.0	Į.	0.0	()	1 9	1 1
3.3 30.			0.0	0.0	1 0		0.0	0 0	7 0 T	1 1)]	ı
96.7 29.	1 1	0 (0.0			ı		8.7	ļ	1	ı
10.0 32.	1		0.0) • • †	ı		ı		0.0		ı	ı
23.3 36.	ł		ŧ	ı	0.0		i	ŀ	t	5.0	1	ı
26.7 33.	ı		ı	ı	1 6		1 1	1 !	1 1	1 1	1	1 1
130.0 28.0	1 1	4.7	1 1	I ‡	000	0.0	1 1	1 1	1 1	1	1	i
30.00				Pleur	Pleuronichthus Verticali	us ver	ticalis					
									1			
TA	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
0.0 51.	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		4.6	1	8.3			ì	0.0	ı	ı	ı
3.3 40.	1	0.0	0.0	0.0	ı	0.0	15.1	ı	0.0	1 1	1 1	1 1
3.3 42.	1 9		0.0			0		1 = 1			1	i
6.7 35.		1 1	0.0	10.7	1	6 6		ı	0.0	ı	ı	į
0.0 28.	0.0	ı	0.0	4	1			ì		1	I	I
3.3 28.	0.0		0.0		1 0			1 4		ı	1	1 1
6.7 29.	ı		0.0	ı			1 1			1 1	1 1	1
96.7 30.	1 !		0.0	l I	o r		i			ı	1	ł
03.3 29.		0 0	0.0	0.0		0 0	ı			1	1	1
03.3 30.	ı		0.0		١		ı			ı	1	į
03.3 35.	ı		0.0		ı		ı			l	i	ı
06.7 31.	1		0.0	3.8	ı.		l I	ж с n с		1	i 1	1 1
110.0 32.4	1 1	0.0	0.0	1 1	1 1		l I			1	ı	ı
		•		Deatt	Deattichthus		melanostictns					
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1		Tac C C	t curting a							
-	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
73.3 50.0		0.0	0.0	1	0.0	4.0	0.0	ı	0.0	ı	I	i

TABLE 4. (cont.)

	P. OCT.								1	1		EP. OCT.	ı	1	1	1	1	1		l I	ı	•	1	1	l 1	ı	1	1													
	SEP		1	•	1	1) c	7.			S	1	1	1	1	1	}		1 1	1	I	ı	I	}	1	1	ı	ı	1	I	ł	1 1	ı	1	1	1	ı	1	١	1
	y AUG						4	0.4				Y AUG		1	l	i	1	I	l	ا ا ح	- 0	- 9	- 0	I	۱ ۱	1	1	- 0					i 1			0	- 0	0		1	1
	JULY					7		l	ı	t		JULY		1	1	1	1	1			0			1		. 0		0.					•						ທີ່		
	JUNE		1	ı	. 1	1 0		1	ı	į	ø	JUNE										I	I	l	ł I	ı	ı	ı	1	ŀ	ı	I	1 1	1	ı	ł	1	I	I	(ı
.dc	MAY	l .			٠		1	I	ı	ı	sh larva	MAY		ŀ	ı	ı	ı	I	l	1 1	0.0	1	1 (9.0	0.0	61.8													63.4		
Symphurus spp.	APR.	į i							0		ted fish	APR.	0.0			0.0	0.0		I		0.0			ı						ø			0.0						5.7		
Symph	MAR.			. 1		1	l		0.0		Disintegrated	MAR.	1 1 1 1 1 1	0.0	ı		0.0		ı		0.0	•	ı	I	1 1	ı I	ı	0.0	0.0			1	1	1 1			0.0		1	1	ı
	FEB.	1			0	0.0			l	ı	Disi	FEB.		ı	0.0		ı		0.0	0	1	8	30.5	I				ı	ı	ì			0.0		ı	ı	1	ı	0.0		
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	Z	1	٥	7 0	> c	28.0	å.	s o	5.	8		 	10	5	0	0	5.	0	0	90.0	-	0	90.	0			. 0	48.	۲.	5.	0	0			•		0	0	0.	0	_
	STATION	1	7:	ۍ د د	٠,	93.3	93.	· .	20.	20.		STATION	10	, ~	, m	9	9	9	، و	2002		0	0.0	0.0		, , ,		9	9	9	و و	۰	، ف	ه س				0	0		٠,

Disintegrated fish larva (cont.)

ocT.		
SEP.		
AUG.		111111111
JULY	000000000000000000000000000000000000000	
JUNE	46.6 10.0 10.0 10.0 10.0 10.0 115.2 17.8 47.6	
MAY	2 9 2 2 2 2 2 3 2 2 3 3 3 3 3 4 4 6 3 3 4 4 6 3 3 4 6 6 6 6	111111111
APR.	2 4 4 8 5 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	
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SEP. SEP AUG. 1 1 1 1 1 1 0.00 121.2 117.0 114.3 11 JULY JULY 1 1 1 1 1 JUNE JUNE 00000 Disintegrated fish larva (cont.) larva MAY $1 \quad 1 \quad 1 \quad 1 \quad 1 \quad 1 \quad 1$ Unidentified fish 27.3 10.8 0.0 0.0 0.0 APR. APR. 0 000 000 000 0.0 8.9 10.2 MAR. MAR FEB. FEB. 0.0000 JAN DEC. DEC. NOV NOV 1 1 1 1 1 1 52.5 80.0 50.0 52.0 55.0 STATION STATION 106.7 110.0 1110.0 1110.0 1110.0 1110.0 1113.3 1113.3 1113.3 1113.3 1120.0 120.0 123.3 123 60.0 63.3 63.3 63.3

OCT.

TABLE 4. (cont.)

Unidentified fish larva (cont.)

OCT. SEP. JUNE 000 10.00 10 20.00 20.00 20.00 20.00 0.00 0.00 0.00 DEC 0000000 STATION 66.77 996.77

Unidentified fish larva (cont.)

STATION	2	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.
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23	, L	4		ı	1	0.0		ı	ı	i	ı	ı	ı
23.	0	ı	0.	1	ı	0.0		ı	ì	ı	i	1	1
26.	3	1		1	ı	1		i	ı	ı	1	î	I
26.	ď	1		ı	ı	1		ì	ı	ı	1	I	1
26.	0	1		1	ı			ı	í	ı	ı	ı	ı
26.	0	1		ı	l	28.1		ı	ı	ı	ı	ı	I
30.	8	1		I	ı	12.0		ı	ι	l	ı	ı	ł
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30.	0	ı	0	1	t	į	14.0	ı	I	ı	ı	1	ı
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36.	0	ı		i	ı	ı	ı	ı	ŀ	ì	ı	ı	I

Summary of pooled occurrences of all larval fish taxa taken on CalCOFI surveys from 1972 to 1981. Data for 1974, 1977, and 1980 represent single cruises that are part of surveys in 1975, 1978, and 1981, respectively. Taxa are listed in the same order as Table 4. TABLE 5.

	7161	19/4	CIGT	1161	10101		
	1	1	[1	1		
Albula vulpes	1	ı	1	1	ì	1	1
_	26	2	8	ı	m i	1	ı
Rtrumeus acuminatus	4	1	15	i	ייעב	ı	ı
Opisthonema spp.			⊣ :	1 0	T		000
Sardinops sagax	27	11,	n.	gœ	₫ L	13	07
Engraulis mordax			248	4 /	404		٦,
Argentina sialis		9	59	- 0	30	13	0. F. C
Nicrostoma microstoma		œ	40	3	₽# C	٥	
Nansenia candida		1 (52	1 -	25	1 (
Nansenia crassa	3	8	17	П (19	*1 r	
Bathylagus spp.		1	41	77	4 /	T	
lor		ł	1 4	1	2	١٠	
	$\overline{}$	2	\neg		1	4	•
oct	345	13	273	29	387	13	744
pac		1	\sim	1	4		7
Wes		15	156	20	298	11	
Leuroglossus stilbius	œ		9	28	_		5
Bathuluchnops exilis		ı	1	ı	ŀ	I	
longi	-	I	ı	I	l	I	
ostoma	ı	1	1	!	ı	I	'
	7.	ı	ı	ı	1	1	'
Camer road	000		1	ı	2	1	(*)
Constitute and	7	10		1		7	
CONCOCOMPACTOR	130	30	165	2.0		38	162
Cyclothe SPP.	5	9		2	73	3	
Danaphos Characas	47)		1		1	'
Caci	- 1	1	1	ı	2	1	
dde.	7	-	α	2	40	4	3.8
Ichenyococcus spp.	~ 00	+ 1	· -	1		-	
Valenciennellus scellacus	176	AB	164	40	379	65	222
Tacer	•) F	0	P	. ~		1
Vinciguerria poweriae	-	63		40	1		
Sternoptychidae	177	0 -	78	7 -	126	12) 4
٥,	4 (0 7 5		0	14		
idiacantnus antrostomus	C 7	ОТ		וכ	20	, ,	1 4
Ŋ	C ,	1	7		77	ļ	וכ
Bathophilus spp.	ΙŢ	i	ı	l	10	l	
Eustomias spp.	7	1	t ·	40	-	1	
Photonectes spp.	I	ı	1	I	9	ļ	7 .
Tactostoma macropus		ı		1			
Stomias atriventer	117	6	59	9	110	11	7.7
Myctophiformes	2	l	t	I	1	I	
Evermannellidae	1	ı	1	1		1	
	32	5	17	ŧ		J	
	82	16	39	11		11	58
Notolenis risso	10)	5	1	17	1	5
Stemonosudis massina	2	ı	1	1	_	1	!
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NAME	1972	1974	1975	1977	1978	1980	1981
Aulopus spp.	6	1 =	10	1 !	23		1 6
୍ଷ	t t	1 1	2	1		1 1	2
spp. dentata	9		ı m	1 1 4	î II	1 (4:
Rosenblattichthys volucris Sconelarchoides nicholsi	15 16	7	23 2	2 -		7 -	_
spp.	124	12	19	9	32	3	11
Bolinichthys Spp.		1 1 4	3 1 3) 4	-	10	100
Ceratoscopelus townsendi Diaphus spp.	107	n Ι (20	C	141	7	25
Lampadena urophaos Lampanuctus spp.	281	35		16	19 269	32	
Lampanyctus regalis	25	; —	2) I	9	i t	
rifteri	187	11	149	ω 1	147	16	81
4	6	1		ı	28	1	ι ∞
ns	Ĺ			1 :		10	- 756
Stenobrachius leucopsarus	356	67	155 -	11	300	10	
y B C	218	38	342	7	330	13	237
-	1	ı	1	ı	2	ı	1
pte	9	ı	Э	I	1.4	I	ı
Centrobranchus spp.	1 1	1 4	ולן	ות	24	10	1 8
Diogenichtnys spp. Diogenichthys atlanticus	89	22	141	14	191	19	09
	201	29	_	22	9 6	34	26 6
Electrona rissoi Gonichthus tenuiculus	49	0	14	п п	44	2	- ∞
spp.		F		1		ı	
Hygophum atratum	120	9	16		47	10	10
hygophum reinharatii Loweina rara	12	l I	v w			9 1	1 m
9	2.1	1 '	1 9	1 1	1 4	1 •	
Myctophum nitidulum Protomortophum crockeri	13	9 6	22		361	87	344
	, —	1 1	١	1	1	1	- 1
ca	100	14	120	9		11	91
Tarletonbeania crenularis	377	26	215	- '	9/6	17	7/
Synodus spp.	11	~ 1	- 1	- 1		7 1	- 1
מ	1	I	1	1	1	ı	ı
Gadus macrocephalus	1 3	1	i	t	i	ı	-
Microgadus proximus Merluccius productus	305	- 91	279	14	222	21	177
	14) I		1			
Physiculus spp.	1 1	1 1	1 ~	1 1	1 49	1 1	→ ♥
Maci out mae	0.1		ז		>		•

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WAN W	1972	1974	1975	1977	1978	1980	1981
	1	1 1	1	1	1 1	1 1	1 1 1
Ophidiiformes	6	ì	15	I	18	1	19
Brosmophycis marginata	7	ı	5	1	11	ı	5
Carabidae	2	i	ı	ı	F	ł	1
Chilara taylori	e	ı	17	ı	4	i	t
Ophidion scrippsae	7	9	18	1	9	ı	-
Porichthus spp.	1	I	ı	ι	~	ı	I
70	7	1	ı	I	1	1	ſ
Ceratioidei	9	~	11	ı	4	1	ŧ
Lonhiidae	7	1	ı	I	١	ı	ł
Gobiesocidae	2	ı	10	1	3	I	1
Exercidae	1		7	I	7	1	æ
Hemiramphidae	ı	1	ı	J	1	ŀ	7
Oxunorhamphus micronterus	7	ı	ı	ı	ı	ı	i
Cololabis saira	31	-	7	ı	10	٣	7
Atherinidae	3	3	7	t	13		٣
Trachinteridae	99	7	18	2	10		5
Firtaeniophoridae	2	1	ı	ı	2	I	ł
Melambaes snn.	219	6	130	6	181	6	79
U	15	1	18	2	42	2	21
Score Johernx robustus	1	ı	I	ı	5	ı	1
Constonedue hieninoene	21	4	ď	m	19	1	4
Scoperogadas Dispinosas	, -	٠,	ן ו)	. ~	2	4
Macrordinphosus gracuits	1 (יי ני	α	ı	o ve	1	4
Syngnathus Spp.	7 .	٠.	<u>.</u>	1	۰ -	C	7
Agonidae	1,	T !	11	ı	٠!	9 1	- 1
Anoplopoma timbria	- °	1 L	- * *	, ,	7.1	C	2.2
Cottidae	87	ກດ	44	7	7 7	7 (6.2
Scorpaenichthys marmoratus	T T	۰ ۲	T	l	י פ	C	1 1
Cyclopteridae	14	-	13	í	ne	۱ -	•
Hexagrammidae	16	ı		I	7	T	۱ -
Ophiodon elongatus	1 4	ŀ		I	ı	ı	٦,
Oxylebius pictus	æ	1	4	1 .	1	1 (ا ۾
Zaniolepis spp.	9	2	23	4	11		5
Scorpaenidae	2	1	ı	ı	ι	1	1
Scorpaena spp.	3	ı	11	ı	∞	ı	9
- 47	509	94	260	30	429	5.2	379
Sebastes aurora	18	l	13	2	29	2	20
Sebastes jordani	06	1	42	I	47	1	22
	13	i	17	1	8	ì	2
Sebastes macdonaldi	15	I	2.1	{	17	1	8
	140	10	73	11	48	7	48
0	65	1	23	i	32	7	19
Prionotus app.	9	ı	12	1	7	ì	3
Blennioidei	6	7	4	ı	ı	i	8
Bathymasteridae	1	ł	ł	1	ł	i	1
Hunsohlennins ann.	16	9	82	ı	50	2	19
	30	6	67	2	23	m	17
Gobiidae	88	26	121	10	73	9	38
Microdesmidae	ı	1	ı	1	1	1	1
Icosteus aeniqmaticus	12	1	1	1	2	ı	æ
abridae	10	ı	1	1	1	ı	i

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NAME	1972	1974	1975	1977	1978	1980	1981
1			1	F 	1 6	1	[
Hallchoeres Spp.	2)	1 1	22	۱ -	21 56	- ۱	13
S	1 1	i		1 1		ł I	m
٦	2	ı		1	I	l	ı
ti.	2	I	22	1	14	ı	16
Hypsypops rubicundus	۱۲	1 1	.J	1 1	l -		T
Mugil Spp. Howella brodie:	2 2	1	-	l I	- 6 -	1 1	1 1
4	7	I	ı m	1	7	I	١
Caranqidae	4	1	10	i	8	1	1
Ia		I		ı		ì	1
sy	116	1	119	1	137	1	87
U.	1 9	1 -	: -	1	2	I	1 0
Coryphaena nippurus	- ٥	٦ ١	4° H	l I	7 6	1 1	
Gerreruae Haemulidae	-	ı	n ee	ŀ	12	ł	2.0
qri	1 1	1	7	1	m	1	2
Medialuna californiensis	2	1	ĸ	1	П	1	1
Caulolatilus princeps	- ;		- 2	1		1	5
	63	28	760	16	111	ł	_ 0
œ'	ı	ı	ı	ı	ŀ		7
Genyonemus lineatus	i	ı	ı	ı	ŀ	15	64
Roncador stearnsii	ı	ı	1	ı	ŧ	ı	
Seripnus politus	ן נ נ	1		-	22	- ۱	97
Serranidae Dolynomidae	17	1 1))	7 -	32	٦ ١	
Gemovidae	15	ı	+ 1	ı	12	ı	_
Scombridae	1	ı	1	ı	1	i	1
Auxis spp.	4	ı	ı	1	2	I	1
Ruthynnus spp.	1	1	1	I	7	ı	1
	▼ (ſ	m	I	1 5	ı	7
Scomber japonicus	η.		æ		19		98
Inunnus albacares Ienidonus vantusi	7 6	۱	1 0	۱ -	֖֖֖֖֖֖֖֖֖֖֖֖֖֖֖֖֖֖֖֖֖֖֖֖֖֖֖֖֖֖֖֖֖֖֖֖֓֞	1 1	Ια
	- 1	⊣ 1	07	→ 1	+ + - -	1	
locking	140	9	46	2	73	1	22
Cubiceps caeruleus		1	ı	ı	1	1	
pauc	12	ı	١	ı	1	١	ı
Psenes pellucidus	J.	ı	ı	ŧ	9	I	i
Psenes sio	ر . آ	1 1		1 (1 4	t	
illim	11	90		m) (65	L	31
U I	13	∞ .	15	7	24	ه م	∞ ς
Uniasmodontidae Uranoscopidae	L5 L	ا ک	. .	5 '	ب م	7 1	07
Dienronectiformes	- 00	- 1	1	į	2	ı	1
Bothidae) ,	ı	ı	ı	1	J	ı
Citharichthys spp.	227	96	357	27	297	09	153
			~ე `		~ ·		
o J	7						

TABLE 5. (cont.)							1
NAME	1972	1974	1975	1977	1978	1980	1981
	1	1		ı	_	1	1
Hippoglossina SPP.		۱۵	36	_	21	ı	9
Hippoglossina stomata	17	25	106	4	47	2	58
Paralichthys californicus	ر د د	1 1)	1	1	ı	1 (
Syacium ovale	א נ	4	12	1	5	ı	e j
Xystreurys 1101ep15	ا کر	' 1	4	1	22	1	24
Glyptocephalus zachirus		٠.	80	2	7	<u>~</u>	2
Hypsopsetta guttulata	٦ ٣	וי	1	ı	, 1	l	1
Isopsetta isolepis	י ר		~	1	1	1	l
Lepidopsetta bilineata	C A 3	. 1	20	1	41	2	57
Lyopsetta exilis) 	-	0	ı	28	l	14
Microstomus pacificus	17	7 7	, C	-	20	i	38
Parophrys vetulus	20	0 1	2	(I	7	ŀ	2
Platichthys stellatus	٥		-	ł	٠ ۱	1	7
Pleuronichthys spp.	1 (7	٦ ٣	1	٧	I	2
Pleuronichthys coenosus	200	۱ -	יי ני	1	, –	ı	1
Pleuronichthys decurrens	ж с	٦ ،	7 6		ی ر	4	11
pleuronichthys ritteri	Σ,	7 -	ה כי ר	, (22	2	24
pleuronichthys verticalis	21	T	TOO	4 !	7	1 1	1
Psettichthys melanostictus	α ς	l C	7 6	_	١٩	1	8
Symphurus spp.	07	0 10	901	4 œ	224	22	147
Disintegrated fish larva	867	170	183	12	162	15	109
Unidentified fish larva	777	17	101	1	1		

TABLE 6. List of stations which were occupied twice in one month during 1981.

Statio	on	Month
96.7	29.0	4
96.7	30.0	4
96.7	32.0	4
96.7	35.0	4
96.7	40.0	4
100.0	29.2	4
100.0	30.0	4
100.0	35.0	4
100.0	40.0	4
103.3	29.0	4
103.3	30.0	4
103.3	35.0	4
103.3	40.0	4
106.7	31.0	4
106.7	32.0	4
106.7	35.0	4
106.7	40.0	4
110.0	35.0	4
110.0	40.0	4
60.0	50.0	6
60.0	52.5	6
60.0	55.0	6
60.0	60.0	6
63.3	50.0	6
63.3	52.0	6
63.3	55.0	6
63.3	60.0	6
63.3	70.0	6
66.7	49.0	6
66.7	50.0	6
66.7	55.0	6
66.7	60.0	6
66.7	70.0	6
66.7	80.0	6

INDEX

This index lists taxa included in Table 4 with their page numbers.

	Page
Clupeiformes	
Clupeidae	
Sardinops sagax	. 58
Engraulidae	,
Engraulis mordax	. 58
Salmoniformes	,
Argentinidae	
Argentina sialis	. 62
Microstoma microstoma	. 63
Nansenia candida	
Nansenia crassa	
Bathylagidae	,
Bathylagus spp	. 65
Bathylagus milleri	
Bathylagus ochotensis	
Bathylagus pacificus	
Bathylagus wesethi	
Leuroglossus stilbius	
Stomiiformes	
Gonostomatidae	
Cyclothone spp	
Danaphos oculatus	
Gonostoma spp	
Ichthyococcus spp	
Valenciennellus stellatus	
Vinciquerria lucetia	
Sternoptychidae	
Stomiatoidea	
Chauliodontidae	
Chauliodus macouni	. 83
Idiacanthidae	
Idiacanthus antrostomus	. 84
Malacosteidae	
Aristostomias scintillans	. 84
Melanostomiidae	
Photonectes spp	. 84
Tactostoma macropus	
Stomiidae	
Stomias atriventer	. 85
Myctophiformes	
Alepisauroidei	
Evermannellidae	. 86
Paralepididae	. 86
Lestidiops ringens	
Notolepis risso	

	Page
Aulopoidei	
Aulopidae	
Aulopus spp	88
Chloropthalmoidei	
Notosudidae	
Scopelosaurus spp	88
Scopelarchidae	00
Benthalbella dentata	88
Rosenblattichthys volucris	89
-	89
Scopelarchus spp	89
Myctophoidei	0.0
Myctophidae	89
Lampanyctinae	
Ceratoscopelus townsendi	92
Diaphus spp	93
Lampadena urophaos	94
Lampanyctus spp	94
Lampanyctus regalis	97
Lampanyctus ritteri	97
Notolychnus valdiviae	99
Notoscopelus resplendens	99
Stenobrachius leucopsarus	99
Triphoturus mexicanus	101
Myctophinae	
Diogenichthys spp	104
Diogenichthys atlanticus	105
Diogenichthys laternatus	106
Electrona rissoi	107
Gonichthys tenuiculus	107
Hygophum spp	108
Hygophum atratum	108
Hygophum reinhardtii	108
Loweina rara	109
Myctophum nitidulum	109
Protomyctophum crockeri	109
Symbolophorus californiensis	112
Tarletonbeania crenularis	114
Synodontoide	
Synodontidae	
Synodus spp	115
Gadiformes	
Gadidae	
Gadus macrocephalus	115
Merlucciidae	
Merluccius productus	115
Moridae	
Physiculus spp	118
Macrouridae	118
Ophidiiformes	118
Bythitidae	
Brosmophycis marginata	119

	Page
Ophidion scrippsae	119
Lophiiformes	119
Ceratioidei	119
Beloniformes	440
Exocoetidae	119
Hemiramphidae	119
Scomberesocidae	
Cololabis saira	119
Atheriniformes	
Atherinidae	120
Lampriformes	
Trachipteridae	120
Beryciformes	
Melamphaidae	100
Melamphaes spp	120
Poromitra spp	122 122
Scopelogadus bispinosus	122
Syngnathiformes Macroramphosidae	
Macroramphosus gracilis	122
Syngnathidae	122
Syngnathus spp	122
Scorpaeniformes	
Cottoidei	
Agonidae	123
Cottidae	123
Scorpaenichthys marmoratus	123
Cyclopteridae	124
Hexagrammidae	124
Ophidion elongatus	124
Oxylebius pictus	124
Zaniolepis spp	124
Scorpaenoidei	
Scorpaenidae	205
Scorpaena spp	125
Sebastes spp	125 128
Sebastes aurora	120
Sebastes jordani	129
Sebastes macdonaldi	130
Sebastes paucispinis	130
Sebastolobus spp	131
Triglidae	
Prionotus spp	131
Perciformes	
Blennioidei	131
Blenniidae	
Hypsoblennius spp	132
Clinidae	132
Gobioidei	

	Page
Gobiidae	133
Icosteoidei	133
Icosteidae	
Icosteus aenigmaticus	134
Labroidei	T24
Labridae	
	134
Halichoeres spp	
Oxyjulis californica	134
Semicossyphus pulcherPomacentridae	135
	205
Chromis punctipinnis	135
Hypsypops rubicuncus	135
Percoidei	
Carangidae	135
Seriola lalandi	136
Trachurus symmetricus	136
Coryphaenidae	
Coryphaena hippurus	137
Gerreidae	137
Haemulidae	137
Kyphosidae	
Girella nigricans	138
Malacanthidae	
Caulolatilus princeps	138
Sciaenidae	138
Cheilotrema saturnum	138
Genyonemus lineatus	138
Roncador stearnsii	139
Seriphus politus	139
Serranidae	140
Scombroidei	140
Gempylidae	141
Scombridae	141
Sarda chiliensis	141
Scomber japonicus	141
	141
Trichiuridae	1 4 2
Lepidopus xantusi	142
Sphyraenoidei	
Sphyraenidae	2.40
Sphyraena argentea	143
Stromateoidei	
Centrolophidae	
Icichthys lockingtoni	143
Stromateidae	
Peprilus simillimus	143
Tetragonuridae	
Tetragonurus cuvieri	144
Trachinoidei	
Chiasmodontidae	145
Pleuronectiformes	
Pleuropectoidei	

	Page
Paralichthyidae	
Citharichthys spp	145
Citharichthys stigmaeus	148
Hippoglossina stomata	149
Paralichthys californicus	149
Xystreurys liolepis	150
Pleuronectidae	200
Glyptocephalus zachirus	150
Hypsopsetta guttulata	151
Lyopsetta exilis	151
Microstomus pacificus	152
Parophrys vetulus	152
Platichthys stellatus	153
Pleuronichthys spp	153
Pleuronichthys coenosus	153
Pleuronichthys decurrens	154
Pleuronichthys ritteri	154
Pleuronichthys verticalis	154
Psettichthys melanostictus	154
Soleoidei	
Cynoglossidae	
Symphurus spp	155
Disintegrated fish larva	155
Unidentified figh larva	157

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	18
	- 38
	100
	15
	4
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